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THE

London and *Country*

BREWER:

Containing an ACCOUNT,

I. Of the Nature of Barley-Corn, and of the proper Soils and Manures for the Improvement thereof.
II. Of making Malts.
III. To know good from bad Malts.
IV. Of the Uſe of the Pale, Amber and Brown Malts.
V. Of the Nature of ſeveral Waters and their Uſe in Brewing.
VI. Of Grinding Malts.
VII. Of Brewing in General.
VIII. Of the *London* Method of Brewing Stout Butt Beer, Pale and Brown Ales.
IX. Of the Country or private Way of Brewing.
X. Of the Nature and Uſe of the Hop.
XI. Of Boiling Malt Liquors and to Brew a Quantity of Drink in a little Room, and with a few Tubs.
XII. Of Foxing or Tainting of Malt Liquors, their Prevention and Cure.
XIII. Of fermenting and working of Beers and Ales, and the unwholſome Practice of beating in the Yeaſt Detected.
XIV. Of ſeveral Artificial Lees for feeding, fineing, preſerving and reliſhing Malt Liquors.
XV. Of ſeveral pernicious Ingredients put into Malt Liquors to encreaſe their ſtrength.
XVI. Of the Cellar or Repoſitory for keeping Beers and Ales.
XVII Of Sweetning and Cleaning Casks.
XVIII. Of Bunging Casks and Carrying them to ſome Diſtance.
XIX. Of the Age and Strength of Malt Liquors.
XX. Of the Profit and Pleaſure of Private Brewing, and the Charge of buying Malt Liquors.

To which is added,

A Philoſophical Account of Brewing ſtrong *October* Beer, by an Ingenious Hand.

By a Perſon formerly concern'd in a common Brew-Houſe at *London*, but for near twenty Years paſt has reſided in the Country.

Recommended by the Dublin Society.

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BRITISH MUSEUM
18 70
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THE PREFACE.

THE *many Inhabitants of Cities and Towns, as well as Travellers, that have for a long time ſuffered great Prejudices from unwholſome and unpleaſant Beers and Ales, by the badneſs of Malts, underboiling the Worts, mixing injurious Ingredients, the unskilfulneſs of the Brewer, and the great Expence that Families have been at in buying them clogg'd with a heavy Exciſe, has moved me to undertake the writing of this Treatiſe on Brewing; wherein I have endeavour'd to ſet in a true light the many odvantages of Body and Purſe that may ariſe from a due Knowledge and Management in Brewing Malt Liquors, which are of the greateſt Importance, as they are in a conſiderable degree our Nouriſhment and the common Diluters of our Food; ſo that on their goodneſs depends very much the Health and Long Life of the Body.*

This bad Oeconomy in Brewing has brought on ſuch a Diſrepute, and made our Malt Liquors in general ſo odious, that many have been conſtrain'd, either to be at an Expence for better Drinks than their Pockets could afford, or take up with a Toaſt and Water to avoid the too juſtly apprehended ill Conſequences of Drinking ſuch Ales and Beers.

Wherefore I have given an Account of Brewing Beers and Ales after ſeveral Methods; and alſo ſeveral curious Receipts for feeding, fineing and preſerving Malt Liquors, that are moſt of them wholſomer than the Malt it ſelf, and ſo cheap that none can object againſt the Charge, which I thought was the ready way to ſupplant the uſe of thoſe unwholſome Ingredients that have been made too free with by ſome ill principled People merely for their own Profit, tho' at the Expence of the Drinker's Health.

I hope I have adjuſted that long wanted Mehod of giving a due Standard both to the Hop and Wort, which never was yet (as I know of) rightly aſcertain'd in Print before, tho' the want of it I am perſwaded has been partly the occaſion of the ſcarcity of good Drinks, as is at this time very evident in moſt Places in the Nation. I have here alſo divulg'd the Noſtrum of the Artiſt Brewer that he has ſo long valued himſelf upon, in making a right Judgment when the Worts are boiled to a true Criſis; a matter of conſiderable Conſequence, becauſe all ſtrong Worts may be boiled too much or too little to the great Loſs of the Owner, and without this Knowledge a Brewer muſt go on by Gueſs; which is a hazard that every one ought to be free from that can; and therefore I have endeavour'd to explode the old Hour-glaſs way of Brewing, by reaſon of the ſeveral Uncertainties that attend ſuch Methods, and the hazard of ſpoiling both Malt and Drink; for in ſhort where a Brewing is perform'd by Ladings over of ſcalding Water, there is no occaſion for the Watch or Hour-glaſs to boil the Wort by, which is beſt known by the Eye, as I have both in this and my Second Book made appear.

I have here obſerved that neceſſary Caution, which is perfectly requiſite in the Choice of good and the Ma-

nage-

nagement of bad Waters; a Matter of high Importance, as the Uſe of this Vehicle is unavoidable in Brewing, and therefore requires a ſtrict Inſpection into its Nature; and this I have been the more particular in, becauſe I am ſenſible of the great Quantities of unwholſome Waters uſed not only by Neceſſity, but by a miſtaken Choice

So alſo I have confuted the old received Opinion lately publiſhed by an eminent Hand, that long Maſhings are the beſt Methods in Brewing; an Error of dangerous Conſequence to all thoſe who Brew by Ladings over of the hot Water on the Malt.

The great Difficulty, and what has hitherto proved an Impediment and Diſcouragement to many from brewing their own Drinks, I think, I have in ſome meaſure removed, and made it plainly appear how a Quantity of Malt Liquor may be brewed in a little Room and in the hotteſt Weather, without the leaſt Damage by Foxing or other Taint.

The Benefit of Brewing entire Guile Small-beer from freſh Malt, and the ill Effects of that made from Goods after ſtrong Beer or Ale; I have here expoſed, for the ſake of the Health and Pleaſure of thoſe that may eaſily prove their advantage by drinking of the former and refuſing the latter.

By the time the following Treatiſe is read over and thoroughly conſidered, I doubt not but an ordinary Capacity will in ſome degree be a better Judge of good and bad Malt Liquors and have a Knowledge in Brewing that formerly he was a ſtranger to; and therefore I am in great Hopes theſe my Efforts will be one principal Cauſe of the reforming our Malt Liquors in moſt Places; and that more private Families than ever will come into the delightful and profitable

Practice

Practice of brewing their own Drinks, and thereby not only ſave almoſt half in half of Expence, but enjoy ſuch as has paſſed thro' its regular Digeſtions, and is truly pleaſant, fine, ſtrong and healthful.

I queſtion not but this Book will meet with ſome Scepticks, who being either prejudiced againſt the Introduction of new Improvements, or that their Intereſt will be hereby eclipſed in time; to ſuch I ſay I do not write, becauſe I have little Hopes to reform a wrong Practice in them by Reaſon and Argument. But thoſe who are above Prejudice may eaſily judge of the great Benefits that will accrue by the following Methods, I have here plainly made known, and of thoſe in my Second Book that I have almoſt finiſhed and hope to publiſh in a little time, wherein I ſhall ſet forth how to Brew without boiling Water or Wort, and ſeveral other Ways that will be of conſiderable Service to the World.

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CHAP.

CHAP. I.

Of the Nature of Barley-Corn, *and of the proper Soils and Manures for the Improvement thereof.*

THIS Grain is well known to excel all others for making of Malts that produce thoſe fine *Britiſh* Liquors, Beer and Ale, which no other Nation can equal; but as this Excellency cannot be obtained unleſs the ſeveral Ingredients are in a perfect State and Order, and theſe alſo attended with a right Judgment; I ſhall here endeavour to treat on their ſeveral Particulars, and firſt of Soils.

This Grain I annually ſow in my Fields on diverſities of Soils, and thereby have brought to my Knowledge ſeveral Differences ariſing therefrom. On our Red Clays this Grain generally comes off reddiſh at both Ends, and ſometimes all over, with a thick Skin and tough Nature, ſomewhat like the Soil it grows in, and therefore not ſo valuable as that of contrary Qualities, nor are the black

blewiſh marly Clays of the Vale much better, but Loams and Gravels are better than them, as all the Chalks are better than Gravels; on theſe two laſt Soils the Barley acquires a whitiſh Body, a thin Skin, a ſhort plump Kernel, and a ſweet Flower, which occaſions thoſe fine pale and amber Malts made at *Dunſtable*, *Tring* and *Dagnal*, from the Barley that comes off the white and gravelly Grounds about thoſe Places; for it is certain there is as much Difference in Barley as in Wheat or other Grain, from the ſort of Soil it comes off, as appears by the excellent Wheats that grow in the marly vale Earths, Peas in Sands, and Barley in Gravels and Chalks, *&c.* For our Mother Earth, as it is deſtinated to the Service of Man in the Production of Vegetables, is compoſed of various Sorts of Soils for different Seeds to grow therein. And ſince Providence has been pleaſed to allow Man this great Privilege for the Imployment of his Skill and Labour to improve the ſame to his Advantage; it certainly behoves us to acquaint ourſelves with its ſeveral Natures, and how to adapt an agreeable Grain and Manure to their natural Soil, as being the very Foundation of enjoying good and bad Malts. This is obvious by parallel Deductions from Turneps ſown on rank clayey loamy Grounds, dreſſed with noxious Dungs that render them bitter, tough, and nauſeous, while thoſe that grow on Gravels, Sands and chalky Loams under the Aſſiſtance of the Fold, or Soot, Lime, Aſhes, Horn-ſhavings, *&c.* are ſweet, ſhort and pleaſant. 'Tis the ſame alſo with Salads, Aſparagus, Cabbages, Garden-beans, and all other culinary Ware, that come off thoſe rich Grounds glutted with great Quantities of *London* and other rank Dungs, which are not near ſo pure, ſweet and wholeſome, as thoſe produced from

from Virgin-mould and other healthy Earths and Manures.

There is likewiſe another reaſon that has brought a Diſreputation on ſome of the Barley of the Chiltern or hilly Country, and that is, the too often ſowing of one and the ſame piece of Ground, whereby its ſpirituous, nitrous and ſulphureous qualities are exhauſted and worn out, by the conſtant Attraction of its beſt Juices for the Nutriment of the Grain; To ſupply which, great Quantities of Dungs are often incorporated with ſuch Earths, whereby they become impregnated with ſour, adulterated, unwholeſome Qualities, that ſo affect the Barley that grows therein, as to render it incapable of making ſuch pure and ſweet Malts, as that which is ſown in the open Champaign-Fields, whoſe Earths are conſtantly reſted every third Year, called the Fallow-ſeaſon, in order to diſcharge their crude, phlegmatick and ſour Property, by the ſeveral Turnings that the Plough gives them part of a Winter and one whole Summer, which expoſes the rough clotty looſe parts of the Ground, and by degrees brings them into a condition of making a Lodgment of thoſe ſaline Benefits that ariſe from the Earths, and afterwards fall down, and redound ſo much to the Benefit of all Vegetables that grow therein, as being the Eſſence and Spring of Life to all Things that have Root, and tho' they are firſt exhaled by the Sun in Vapour from the Earth as the Spirit or Breath thereof, yet is it return'd again in Snows, Hails, Dews, *&c.* more than in Rains, by which the Surface of the Globe is ſaturated; from whence it reaſcends in the Juices of Vegetables, and enters into all thoſe Productions as Food and Nouriſhment, which the Creation ſupplies.

Here then may appear the Excellency of ſteeping Seed-Barley in a Liquor lately invented, that

impregnates and loads it with Nitre and other Salts that are the nearest of all others to the true and original Spirit or Salt of the Earth, and therefore in a great measure supplies the Want thereof both in Incloſure and open Field; for even in this laſt it is ſometimes very ſcarce, and in but ſmall Quantities, eſpecially after a hot dry Summer and mild Winter, when little or no Snows have fallen to cover the Earth and keep this Spirit in; by which and great Froſts it is often much encreaſed and then ſhews itſelf in the Warmth of Well-waters, that are often ſeen to reak in cold Seaſons. Now ſince all Vegetables more or leſs partake of thoſe Qualities that the Soil and Manures abound with in which they grow; I therefore infer that all Barley ſo imbibed, improves its Productions by the Aſcenſion of thoſe ſaline ſpirituous Particles that are thus lodged in the Seed when put into the Ground, and are part of the Nouriſhment the After-crop enjoys, and for this Reaſon I doubt not, but when Time has got the Aſcendant of Prejudice, the whole Nation will come into the Practice of the invaluable Receipt publiſh'd in two Books, entituled, *The Practice of Farming and Husbandry*, and, *The Practical Farmer*; both writ by *William Ellis* of *Little Gaddeſden* near *Hempſtead* in *Hertfordſhire*, not only for Barley, but other Grains.

But notwithſtanding Barley may grow on a light Soil with a proper Manure; and improved by the Liquor of this Receipt, yet this Grain may be damaged or ſpoiled by being reaped too ſoon, which may afterwards be diſcovered by its ſhrivelled and lean Body that never will make right good Malt; or if it is reaped at a proper time, and houſed damp, or wettiſh, it will be apt to heat and mow-burn, and then it will never make ſo

good

good Malt, becauſe it will not ſpire, nor come ſo regularly on the Floor as that which was inned dry.

Again, I have known one part of a Barley-crop almoſt green at Harveſt, another part ripe, and another part between both, tho' it was all ſown at once, occaſion'd by the ſeveral Situations of the Seed in the Ground, and the ſucceding Droughts. The deepeſt came up ſtrong and was ripe ſooneſt, the next ſucceeded; but the uppermoſt, for want of Rain and Cover, ſome of it grew not at all, and the reſt was green at Harveſt. Now theſe Irregularities are greatly prevented and cured by the Application of the Ingredients mentioned in the Receipt, which infuſes ſuch a Moiſture into the Body of the Seed, as with the help of a little Rain and the many Dews, makes it ſpire, take root and grow, when others are ruined for want of the Aſſiſtance of ſuch Steeping.

Barley like other Grain will alſo degenerate, and become rank, lean and ſmall bodied, if the ſame Seed is ſown too often in the ſame Soil; 'tis therefore that the beſt Farmers not only change the Seed every time, but take due care to have it off a contrary Soil that they ſow it into; this makes ſeveral in my Neighbourhood every Year buy their Barley-ſeed in the Vale of *Ailsbury*, that grew there on the black clayey marly Loams, to ſow in Chalks, Gravels, *&c.* Others every ſecond Year will go from hence to *Fullham* and buy the Forward or Rath-ripe Barley that grows there on Sandy-ground; both which Methods are great Improvements of this Corn, and whether it be for ſowing or malting, the plump, weighty and white Barley-corn, is in all reſpects much kinder than the lean flinty ſorts.

CHAP.

CHAP. II.

Of making MALTS.

AS I have deſcribed the Ground that returns the beſt Barley, I now come to treat of making it into Malt; to do which, the Barley is put into a leaden or tyled Ciſtern that holds five, ten or more Quarters, that is covered with Water four or ſix Inches above the Barley to allow for its Swell; here it lies five or ſix Tides as the Malſter calls it, reckoning twelve Hours to the Tide, according as the Barley is in Body or in Dryneſs; for that which comes off Clays, or has been waſh'd and damag'd by Rains, requires leſs time than the dryer Grain that was inned well and grew on Gravels or Chalks; the ſmooth plump Corn imbibing the Water more kindly, when the lean and ſteely Barley will not ſo naturally; but to know when it is enough, is to take a Corn end-ways between the Fingers and gently cruſh it, and if it is in all parts mellow, and the Husk opens or ſtarts a little from the Body of the Corn, then it is enough: The Nicety of this is a material point; for if it is infus'd too much, the Sweetneſs of the Malt will be greatly taken off, and yield the leſs Spirit, and ſo will cauſe Deadneſs or Sourneſs in Ale or Beer in a ſhort time, for the Goodneſs of the Malt contributes much to the Preſervation of all Ales and Beers. Then the Water muſt be drain'd from it very well, and it will come equal and better on the Floor, which may be done in twelve or ſixteen Hours in temperate Weather, but in cold near thirty. From the Ciſtern it is

put

put into a ſquare Hutch or Couch, where it muſt lye thirty Hours for the Officer to take his Gauge, who allows four Buſhels in the Score for the Swell in this or the Ciſtern, then it muſt be work'd Night and Day in one or two Heaps as the Weather is cold or hot, and turn'd every four, ſix or eight Hours, the outward part inwards and the Bottom upwards, always keeping a clear Floor that the Corn that lyes next to it be not chill'd; and aſſoon as it begins or come to ſpire, then turn it every three, four or five Hours, as was done before according to the Temper of the Air, which greatly governs this Management, and as it comes or works more, ſo muſt the Heap be ſpreaded and thinned larger to cool it. Thus it may lye and be work'd on the Floor in ſeveral Parallels, two or three Foot thick, ten or more Foot broad, and fourteen or more in length to chip and ſpire, but not too much nor too faſt; and when it is come enough, it is to be turned twelve or ſixteen times in twenty-four Hours, if the Seaſon is warm, as in *March*, *April* or *May*; and when it is fixed and the Root begins to be dead, then it muſt be thickned again and carefully kept often turned and work'd, that the growing of the Root may not revive, and this is better done with the Shoes off than on; and here the Workman's Art and Diligence in particular is tryed in keeping the Floor clear and turning the Malt often, that it neither moulds nor Acre-ſpires, that is, that the Blade does not grow out at the oppoſite end of the Root; for if it does, the Flower and Strength of the Malt is gone, and nothing left behind but the Acre-ſpire, Husk and Tail: Now when it is at this Degree and fit for the Kiln, it is often practiſed to put it into a Heap and let it lye twelve Hours before it is turned, to heat and mellow, which will much improve the Malt if it is done with

with Moderation, and after that time it muſt be turned every ſix Hours during twenty four; but if it is overheated, it will become like Greaſe and be ſpoiled, or at leaſt cauſe the Drink to be unwholeſome; when this Operation is over, it then muſt be put on the Kiln to dry four, ſix or twelve Hours, according to the Nature of the Malt, for the pale Sort requires more Leiſure and leſs Fire than the amber or brown Sorts: Three Inches thick was formerly thought a ſufficient Depth for the Malt to lye on the Hair-cloth, but now ſix is often allowed it to a Fault; fourteen or ſixteen Foot ſquare will dry about two Quarters if the Malt lyes four Inches thick, and here it ſhould be turned every two, three or four Hours keeping the Hair-cloth clear: The Time of preparing it from the Ciſtern to the Kiln is uncertain, according to the Seaſon of the Year; in moderate Weather three Weeks is often ſufficient. If the Exciſeman takes his Gauge on the Floor he allows ten in the Score, but he ſometimes gauges in Ciſtern, Couch, Floor and Kiln, and where he can make moſt, there he fixes his Charge: When the Malt is dryed, it muſt not cool on the Kiln, but be directly thrown off, not into a Heap, but ſpread wide in an airy Place, till it is thoroughly cool, then put it into a Heap or otherwiſe diſpoſe of it.

There are ſeveral Methods uſed in drying of Malts, as the Iron-plate Frame, the Tyle-Frame, that are both full of little Holes: The Braſs-wyred and Iron-wyred Frame, and the Hair-cloth; the Iron and Tyled one, were chiefly invented for drying of brown Malts and ſaving of Fuel, for theſe when they come to be thorough hot will make the Corns crack and jump by the Fierceneſs of their Heat, ſo that they will be roaſted or ſcorch'd in a little time, and after they are off the Kiln,

Kiln, to plump the Body of the Corn and make it take the Eye, ſome will ſprinkle Water over it that it may meet with the better Market: But if ſuch Malt is not uſed quickly, it will ſlacken and loſe its Spirits to a great Degree, and perhaps in half a Year or leſs may be taken by the Whools (a ſmall Inſect) and ſpoiled: Such haſty dryings or ſcorchings are alſo apt to bitter the Malt by burning its Skin, and therefore theſe Kilns are not ſo much uſed now as formerly: The Wyre-Frames indeed are ſomething better, yet they are apt to ſcorch the outward part of the Corn, that cannot be got off ſo ſoon as the Hair-cloth admits of, for theſe Wyre-Frames muſt be ſwept, when the other is only turned at once; however theſe laſt three ways are now in much requeſt for drying pale and amber Malts, becauſe their Fire may be kept with more leiſure, and the Malt more gradually and truer dryed, but by many the Hair-cloth is reckoned the beſt of all.

Malts are dryed with ſeveral ſorts of Fuel; as the Coak, Welch-coal, Straw, Wood and Fern, *&c.* But the Coak is reckoned by moſt to exceed all others for making Drink of the fineſt Flavour and pale Colour, becauſe it ſends no Smoak forth to hurt the Malt with any offenſive Tang, that Wood, Fern and Straw are apt to do in a leſſer or greater Degree; but there is a Difference even in what is called Coak, the right ſort being large Pit-coal charr'd or burnt in ſome meaſure to a Cynder, till all the Sulphur is conſumed and evaporated away, which is called Coak, and this when it is truly made is the beſt of all other Fuels; but if there is but one Cynder as big as an Egg, that is not thoroughly cured, the Smoak of this one is capable of doing a little Damage, and this happens too often by the Negligence or Avarice of the Coak-maker: There is another Sort by ſome wrongfully called Coak, and rightly named Culme

Welch-coal, from *Swanzey* in *Pembrokeſhire*, being of a hard ſtony Subſtance in ſmall bits reſembling a ſhining Coal, and will burn without Smoak, and by its ſulphurious Effluvia caſt a moſt excellent Whiteneſs on all the outward parts of the grainy Body: In *Devonſhire* I have ſeen their Marble or gray Fire-ſtone burnt into Lime with the ſtrong Fire that this Culm makes, and both this and the charr'd Pit-coal affords a moſt ſweet moderate and certain Fire to all Malt that is dried by it.

Straw is the next ſweeteſt Fuel, but Wood and Fern worſt of all.

Some I have known put a Peck or more of Peas, and malt them with five Quarters of Barley, and they'll greatly mellow the Drink, and ſo will Beans; but they won't come ſo ſoon, nor mix ſo conveniently with the Malt, as the Pea will.

I know a Farmer, when he ſends five Quarters of Barley to be malted, puts in half a Peck or more of Oats amongſt them, to prove he has Juſtice done him by the Maker, who is hereby confin'd not to change his Malt by reaſon others won't like ſuch a Mixture.

But there is an Abuſe ſometimes committed by a neceſſitous Malſter, who to come by Malt ſooner than ordinary, makes uſe of Barley before it is thoroughly ſweated in the Mow, and then it never makes right Malt, but will be ſteely and not yield a due Quantity of Wort, as I knew it once done by a Perſon that thraſhed the Barley immediately from the Cart as it was brought out of the Field, but they that uſed its Malt ſuffered not a little, for it was impoſſible it ſhould be good, becauſe it did not thoroughly chip or ſpire on the Floor, which cauſed this Sort of Malt, when the Water was put to it in the Maſh-tub, to ſwell up and abſorb the Liquor, but not return its due

Quan-

Quantity again, as true Malt would, nor was the Drink of this Malt ever good in the Barrel, but remain'd a raw inſipid Beer, paſt the Art of Man to cure, becauſe this, like Cyder made from Apples directly off the Tree, that never ſweated out their phlegmatick crude Juice in the Heap, cannot produce a natural Liquor from ſuch unnatural Management; for Barley certainly is not fit to make Malt of till it is fully mellowed and ſweated in the Mow, and the Seaſon of the Year is ready for it, without both which there can be no Aſſurance of good Malt: Several Inſtances of this untimely making Malt I have known to happen, that have been the occaſion of great Quantities of bad Ales and Beers, for ſuch Malt retaining ſome of its Barley Nature, or that the Seaſon of the Year is not cold enough to admit of its natural working on the Floor, is not capable of producing a true Malt, but will cauſe its Drink to ſtink in the Cask inſtead of growing fit for Uſe, as not having its genuine Malt-nature to cure and preſerve it, which all good Malts contribute to as well as the Hop.

There is another Damage I have known accrue to the Buyer of Malt by Melilot, a moſt ſtinking Weed that grows amongſt ſome Barley, and is ſo miſchievouſly predominant, as to taint it to a ſad degree, becauſe its black Seed like that of an Onion, being leſſer than the Barley, cannot be entirely ſeparated, which obliges it to be malted with the Barley, and makes the Drink ſo heady that it is apt to fuddle the unwary by drinking a ſmall Quantity: This Weed is ſo natural to ſome Ground, that the Farmer deſpairs of ever extirpating it, and is to be avoided as much as poſſible, becauſe it very much hurts the Drink that is made from Malt mixed with it, by its nauſeous Scent and Taſte, as may be perceived by the

Ointment made with it that bears its Name: I knew a Victualler that bought a Parcel of Malt that this Weed was amongſt, and it ſpoiled all the Brewings and Sale of the Drink, for it is apt to cauſe Feavers, Colicks and other Diſtempers in the Body.

Darnel is a rampant Weed and grows much among ſome Barley, eſpecially in the bad Husbandman's Ground, and moſt where it is ſown with the Seed-barley: It does the leaſt harm amongſt Malt, becauſe it adds a Strength to it, and quickly intoxicates, if there is much in it; but where there is but little, the Malſter regards it not, for the ſake of its inebriating Quality. There are other Weeds or Seeds that annoy the Barley; but as the Screen, Sieve and Throwing will take moſt of them out, there does not require here a Detail of their Particulars. Oats malted as Barley is, will make a weak, ſoft, mellow and pleaſant Drink, but Wheat when done ſo, will produce a ſtrong, heady, nouriſhing, well-taſted and fine Liquor, which is now more practiſed than ever.

CHAP. III.

To know good Malts *from bad.*

THIS is a Matter of great Importance to all Brewers, both publick and private, for 'tis common for the Seller to cry all is good, but the Buyer's Caſe is different; wherefore it is prudent to endeavour to be Maſter of this Knowledge; for I have heard a great Malſter that lived towards *Ware*, ſay, he knew a grand Brewer, that wetted near

near two hundred Quarters a Week, but was not a Judge of good and bad Malts, without which it is impoſſible to draw a true Length of Ale or Beer. To do this I know but few ways, *Firſt*, By the Bite, which is to break the Malt Corn acroſs between the Teeth, in the middle of it or at both Ends, and if it taſteth mellow and ſweet, has a round Body, breaks ſoft, is full of Flower all its length, ſmells well and has a thin Skin, then it is good; *Secondly*, By Water; to take a Glaſs near full, and put in ſome Malt, and if it ſwims, it is right, but if any ſinks to the Bottom, then it is not true Malt, but ſteely and retains ſomewhat of its Barley Nature; yet I muſt own this is not an infallible Rule, becauſe if a Corn of Malt is cracked, ſplit or broke, it will then take the Water and ſink, but there may an allowance be given for ſuch Incidents, and ſtill room enough to make a Judgment. *Thirdly*, Malt that is truly made will not be hard and ſteely, but of ſo mellow a Nature, that if forced againſt a dry Board, will mark and caſt a white Colour almoſt like Chalk. *Fourthly*, Malt that is not rightly made will be part of it of a hard Barley Nature, and weigh heavier than that which is true Malt.

CHAP. IV.

Of the Nature and Uſe of Pale, Amber and Brown Malts.

THE pale Malt is the ſloweſt and ſlackeſt dryed of any, and where it has had a leiſure Fire, a ſufficient time allowed it on the Kiln, and a due Care taken of it; the Flower of the Grain will remain in its full Quantity, and thereby

by produce a greater Length of Wort, than the brown high dry'd Malt, for which reaſon it is ſold for one or two Shillings *per* Quarter more than that: This pale Malt is alſo the moſt nutritious ſort to the Body of all others, as being in this ſtate the moſt ſimple and neareſt to its Original Barley-Corn, that will retain an Alcalious and Balſamick Quality much longer than the brown Sort; the tender drying of this Malt bringing its Body into ſo ſoft a texture of Parts, that moſt of the great Brewers brew it with Spring and Well-Waters, whoſe hard and binding Properties they think agrees beſt with this looſe-bodied Malt, either in Ales or Beers, and which will alſo diſpenſe with hotter Waters in brewing of it, than the brown Malt can.

The Amber-colour'd Malt is that which is dryed in a medium Degree, between the pale and the brown, and is very much in Uſe, as being free of either Extream. Its Colour is pleaſant, its Taſte agreeable and its Nature wholſome, which makes it be preferr'd by many as the beſt of Malts; this by ſome is brewed either with hard or ſoft Waters, or a Mixture of both.

The brown Malt is the ſooneſt and higheſt dryed of any, even till it is ſo hard, that it's difficult to bite ſome of its Corns aſunder, and is often ſo cruſted or burnt, that the farinous Part loſes a great deal of its eſſential Salts and vital Property, which frequently deceives its ignorant Brewer, that hopes to draw as much Drink from a Quarter of this, as he does from pale or amber ſorts: This Malt by ſome is thought to occaſion the Gravel and Stone, beſides what is commonly called the Heart-burn; and is by its ſteely Nature leſs nouriſhing than the pale or amber Malts, being very much impregnated with the fiery fumiferous Particles of the Kiln, and therefore its Drink ſooner becomes

becomes ſharp and acid than that made from the pale or amber Sorts, if they are all fairly brewed: For this reaſon the *London* Brewers moſtly uſe the *Thames* or *New-River* Waters to brew this Malt with, for the ſake of its ſoft Nature, whereby it agrees with the harſh Qualities of it better than any of the Well or other hard Sorts, and makes a luſcious Ale for a little while, and a Butt-Beer that will keep very well five or ſix Months, but after that Time it generally grows ſtale, notwithſtanding ten or twelve Buſhels be allowed to the Hogſhead, and it be hopp'd accordingly.

Pale and Amber Malts dryed with Coak or Culm, obtains a more clean bright pale Colour than if dryed with any other Fuel, becauſe there is not ſmoak to darken and ſully their Skins or Husks, and give them an ill reliſh, that thoſe Malts little or more have, which are dryed with Straw, Wood or Fern, *&c.* The Coak or *Welch* Coal alſo makes more true and compleat Malt, as I have before hinted, than any other Fuel, becauſe its Fire gives both a gentle and certain Heat, whereby the Corns are in all their Parts gradually dryed, and therefore of late theſe Malts have gained ſuch a Reputation that great Quantities have been conſumed in moſt Parts of the Nation for their wholſome Natures and ſweet fine Taſte: Theſe make ſuch fine Ales and Butt-Beers, as have tempted ſeveral of our Malſters in my Neighbourhood to burn Coak or Culm at a great expence of Carriage thirty Miles from *London*.

Next to the Coak-dry'd Malt, the Straw-dry'd is the ſweeteſt and beſt taſted: This I muſt own is ſometimes well malted where the Barley, Wheat, Straw, Conveniencies and the Maker's Skill are good; but as the Fire of the Straw is not ſo regular as the Coak, the Malt is attended with more uncertainty in its making, becauſe it is difficult

to

to keep it to a moderate and equal Heat, and not expoſe the Malt in ſome degree to the Taſte of the Smoak.

Brown Malts are dryed with Straw, Wood and Fern, *&c.* the Straw-dryed is far the beſt, but the Wood Sort has a moſt unnatural Taſte, that few can bear with, but the neceſſitous, and thoſe that are accuſtomed to its ſtrong ſmoaky Tang; yet is it much uſed in ſome of the Weſtern Parts of *England*, and many thouſand Quarters of this Malt have been formery uſed in *London* for brewing the Butt-keeping-Beers with, and that becauſe it ſold for two Shillings *per* Quarter cheaper than the Straw-dryed Malt, nor was this Quality of the Wood-dryed Malt much regarded by ſome of its Brewers, for that its ill Taſte is loſt in nine or twelve Months, by the Age of the Beer, and the Strength of the great Quantity of Hops that were uſed in its Preſervation.

The Fern-dryed Malt is alſo attended with a rank diſagreeable Taſte from the Smoak of this Vegetable, with which many Quarters of Malt are dryed, as appears by the great Quantities annually cut by Malſters on our Commons, for the two prevalent Reaſons of Cheapneſs and Plenty.

At *Bridport* in *Dorſetſhire*, I knew an Inn-keeper uſe half Pale and half Brown Malt for brewing his Butt-Beers, that proved to my Palate the beſt I ever drank on the Road, which I think may be accounted for, in that the Pale being the ſlackeſt, and the Brown the hardeſt dryed, muſt produce a mellow good Drink by the help of a requiſite Age, that will reduce thoſe Extreams to a proper Quality.

CHAP.

CHAP. V.

Of the Nature of ſeveral Waters and their Uſe in Brewing. And firſt of Well-Waters.

WATER next to Malt is what by Courſe comes here under Conſideration as a Matter of great Importance in brewing of wholſome fine Malt-Liquors, and is of ſuch Conſequence that it concerns every one to know the Nature of the Water he brews with, becauſe it is the Vehicle by which the nutritious and pleaſant Particles of the Malt and Hop are conveyed into our Bodies, and there becomes a diluter of our Food: Now the more ſimple and free every Water is from foreign Particles, the better it will anſwer thoſe Ends and Purpoſes; for, as Dr. *Mead* obſerves, ſome Waters are ſo loaded with ſtony Corpuſcles, that even the Pipes thro' which they are carried, in time are incruſted and ſtopt up by them, and are of that petrifying Nature as to breed the Stone in the Bladder, which many of the *Pariſians* have been Inſtances of, by uſing this ſort of Water out of the River *Seine*. And of this Nature is another at *Rowel* in *Northamptonſhire*, which in no great diſtance of time ſo clogs the Wheel of an overſhot Mill there, that they are forced with convenient Inſtruments to cut Way for its Motion; and what makes it ſtill more evident, is the Sight of thoſe incruſted Sides of the Tea-kettles, that the hard Well-Waters are the occaſion of, by being often boiled in them: And it is further related by the ſame Doctor, that a Gentlewoman afflicted

with frequent returns of violent Colick Pains was cured by the Advice of *Van Helmont*, only by leaving off drinking Beer brewed with Well-Water; It's true, ſuch a fluid has a greater Force and Aptneſs to extract the Tincture out of Malt, than is to be had in the more innocent and ſoft Liquor of Rivers: But for this very Reaſon it ought not, unleſs upon meer Neceſſity, to be made Uſe of; this Quality being owing to the mineral Particles and alluminous Salts with which it is impregnated. For theſe Waters thus ſaturated, will by their various Gravities in Circulation, depoſite themſelves in one Part or other of the animal Body, which has made ſome prove the Goodneſs of Water by the lightneſs of its Body in the Water Scales, now ſold in ſeveral of the *London* Shops, in order to avoid the Scorbutick, Colicky, Hypochondriack, and other ill Effects of the clayey and other groſs Particles of ſtagnating Well-Waters, and the calculous Concretions of others; and therefore ſuch Waters ought to be miſtruſted more than any, where they are not pure clear and ſoft, or that don't ariſe from good Chalks or ſtony Rocks, that are generally allowed to afford the beſt of all the Well Sorts.

Spring-Waters are in general liable to partake of thoſe Minerals thro' which they paſs, and are ſalubrious or miſchievous accordingly. At *Uppingham* in *Rutland*, their Water is ſaid to come off an Allum-Rock, and ſo tinges their Beer with its ſaline Quality, that it is eaſily taſted at the firſt Draught. And at *Dean* in *Northamptonſhire*, I have ſeen the very Stones colour the ruſty Iron by the conſtant running of a Spring-Water; but that which will lather with Soap, or ſuch ſoft Water that percolates through Chalk, or a grey Fire-Stone, is generally accounted beſt, for Chalks in this reſpect excell all other Earths, in that it adminiſters

miniſters nothing unwholſome to the perfluent Waters, but undoubtedly abſorbs by its drying ſpungy Quality any ill Minerals that may accompany the Water that runs thro' them. For which Reaſon they throw in great Quantities of Chalk into their Wells at *Ailesbury* to ſoften their Water, which coming off a black Sand-ſtone, is ſo hard and ſharp that it will often turn their Beer ſour in a Week's time, ſo that in its original State it's neither fit to waſh nor brew with, but ſo long as the alcalious ſoft Particles of the Chalk hold good, they put it to both Uſes.

River-Waters are leſs liable to be loaded with metalick, petrifying, ſaline and other inſanous Particles of the Earth, than the Well or Spring Sorts are, eſpecially at ſome diſtance from the Spring-head, becauſe the Rain Water mixes with and ſoftens it, and are alſo much cured by the Sun's heat and the Air's power, for which Reaſon I have known ſeveral ſo ſtrict, that they would not let their Horſes drink near the firſt Riſe of ſome of them; this I have ſeen the ſad Effects of, and which has cauſed me to avoid two that run croſs a Road in *Bucks* and *Hertfordſhire*: But in their runnings they often collect groſs Particles from ouzy muddy Mixtures particularly near Town, that make the Beer ſubject to new Fermentations, and grow foul upon alteration of Weather as the *Thames*-Water generally does; yet is this for its ſoftneſs much better than the hard Sort, however both theſe Waters are uſed by ſome Brewers, as I ſhall hereafter obſerve; but where a River-water can be had clear in a dry time, when no great Rain has lately fallen out of Rivulets or Rivers, that have a gravelly, chalky, ſandy or ſtone-bottom free from the Diſturbance of Cattle, *&c.* and in good Air, as that of *Barkhamſtead St. Peters*

in *Hertfordſhire* is; it may then juſtly claim the name of a moſt excellent Water for brewing, and will make a ſtronger Drink with the ſame Quantity of Malt than any of the Well-waters; inſomuch that that of the *Thames* has been proved to make as ſtrong Beer with ſeven Buſhels of Malt, as Well-water with eight; and ſo are all River-waters in a proportionable degree, and where they can be obtain'd clean and pure, Drink may be drawn fine in a few Days after Tunning.

Rain-water is very ſoft, of a moſt ſimple and pure Nature, and the beſt Diluter of any, eſpecially if received free from Dirt, and the Salt of Mortar that often mixes with it as it runs of tyled Roofs; this is very agreeable for brewing of Ales that are not to be kept a great while, but for Beers that are to remain ſome time in the Casks, it is not ſo well, as being apt to putrify the ſooneſt of any.

Pond-waters; this includes all ſtanding Waters chiefly from Rain, and are good or bad as they happen; for where there is a clean bottom, and the Water lies undiſturbed from the tread of Cattle, or too many Fiſh, in an open ſound Air, in a large Quantity, and where the Sun has free Acceſs; it then comes near, if not quite as good as Rain or River-waters, as is that of *Blew-pot* Pond on the high Green at *Gaddeſden* in *Hertfordſhire* and many others, which are often preferr'd for brewing even beyond many of the ſoft Well-waters about them. But where it is in a ſmall Quantity, or full of Fiſh (eſpecially ſling Tench) or is ſo diſturbed by Cattle as to force up Mud and Filth; it is then the moſt foul and diſagreeable of all others: So is it likewiſe in long dry Seaſons when our Pond-waters are ſo low as oblige us to ſtrain it thro' Sieves before we can uſe it, to take out the ſmall red Worms and other Corruptions,

that

that our ſtagnant Waters are then too full of. The lateſt and beſt Doctors have ſo far ſcrutinized into the prime Cauſe of our *Britiſh* Malady the Scurvy, as to affirm its firſt Riſe is from our unwholſome ſtagnating Waters, and eſpecially thoſe that come off a clayey ſurface, as there are ſome about *Londonderry* and *Amſterdam*, for that where the Waters are worſt, there this Diſtemper is moſt common, ſo that in their Writings they have put it out of all doubt, that moſt of our complicated Symptoms that are rank'd under this general Name, if they don't take their beginning from ſuch Water, do own it to be their chief Cauſe.

CHAP. VI.

Of Grinding Malts.

AS trifling as this Article in Brewing may ſeem at firſt, it very worthily deſerves the Notice of all concern'd therein, for on this depends much the good of our Drink, becauſe if it is ground too ſmall the Flower of the Malt will be the eaſier, and more freely mix'd with the Water, and then will cauſe the Wort to run thick, and therefore the Malt muſt be only juſt broke in the Mill, to make it emit its Spirit gradually, and incorporate its Flower with the Water in ſuch a manner that firſt a ſtout Beer, then an Ale, and afterwards a ſmall Beer may be had at one and the ſame Brewing, and the Wort run off fine and clear to the laſt. Many are likewiſe ſo ſagacious as to grind their brown Malt a Fortnight before they uſe it, and keep it in a dry Place from the

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Influence of too moiſt an Air, that it may become mellower by loſing in a great meaſure the Fury of its harſh fiery Particles, and its ſteely Nature, which this Sort of Malt acquires on the Kiln; however this as well as many other hard Bodies may be reduced by Time and Air into a more ſoluble, mellow and ſoft Condition, and then it will imbibe the Water and give a natural kind tincture more freely, by which a greater Quantity and ſtronger Drink may be made, than if it was uſed directly from the Mill, and be much ſmoother and better taſted. But the pale Malt will be fit for Uſe at a Week's end, becauſe the leiſureneſs of their drying endows them with a Softneſs from the time they are taken off the Kiln to the time they are brewed, and ſupplies in them what Time and Air muſt do in the brown Sorts. This method of grinding Malt ſo long beforehand can't be ſo conveniently practiſed by ſome of the great Brewers, becauſe ſeveral of them brew two or three times a Week, but now moſt of them out of good Husbandry grind their Malts into the Tun by the help of a long deſcending wooden Spout, and here they ſave the Charge of emptying or uncaſing it out of the Bin (which formerly they uſed to do before this new way was diſcovered) and alſo ſave the waſte of a great deal of the Malt-flower that was loſt when carryed in Baskets, whereas now the Cover of the Tun prevents all that Damage. In my common Brew-houſe at *London*, I ground my Malt between two large Stones by the Horſe-mill, that with one Horſe would grind quarters an Hour. But in the Country I uſe a Steel Hand-mill, that coſt at firſt forty Shillings, which will by the help of only one Man grind ſix or eight Buſhels in an Hour, and will laſt a Family many Years without hardning or cutting. There are ſome old-faſhion'd Stone Hand-mills in being, that ſome are Votaries

ties for and prefer to the Iron ones, becauſe they alledge that theſe break the Corn's Body, when the Iron ones only cut it in two, which occaſions the Malt ſo broke by the Stones, to give the Water a more eaſy, free and regular Power to extract its Virtue, than the Cut-Malt can that is more confin'd within its Hull. Notwithſtanding which the Iron ones are now moſtly in Uſe for their great Diſpatch and long Duration. In the Country it is frequently done by ſome to throw a Sack of Malt on a Stone or Brick-floor as ſoon as it is ground, and there let it lye, giving it one Turn, for a Day or two, that the Stones or Bricks may draw out the fiery Quality it received from the Kiln, and give the Drink a ſoft mild Taſte.

CHAP. VII.

Of Brewing in general.

BREWING, like ſeveral other Arts is proſtituted to the opiniated Ignorance of many conceited Pretenders, who if they have but ſeen or been concerned in but one Brewing, and that only one Buſhel of Malt, aſſume the Name of a Brewer and dare venture on ſeveral afterwards, as believing it no other Task, than more Labour, to brew a great deal as well as a little; from hence it partly is, that we meet with ſuch hodge-podge Ales and Beers, as are not only diſagreeable in Taſte and Foulneſs, but indeed unwholeſome to the Body of Man, for as it is often drank thick and voided thin, the Feces or groſs part muſt in my Opinion remain behind in ſome degree. Now what

what the Effects of that may be, I muſt own I am not Phyſician enough to explain, but ſhrewdly ſuſpect it may be the Cauſe of Stones, Colicks, Obſtructions, and ſeveral other Chronical Diſtempers; for if we conſider that the Sediments of Malt-Liquors are the refuſe of a corrupted Grain, loaded with the igneous acid Particles of the Malt, and then again with the corroſive ſharp Particles of the Yeaſt, it muſt conſequently be very pernicious to the *Britiſh* human Body eſpecially, which certainly ſuffers much from the animal Salts of great Quantities of Fleſh that we eat more than People of any other Nation whatſoever; and therefore are more than ordinarily obliged not to add the ſcorbutick mucilaginous Qualities of ſuch groſs unwholeſome Particles, that every one makes a lodgment of in their Bodies, as the Liquors they drink are more or leſs thick; for in plain Truth, no Malt-Liquor can be good without it's fine. The late curious *Simon Harcourt* Eſq; of *Penly*, whom I have had the Honour to drink ſome of his famous *October* with, thought the true Art of Brewing of ſuch Importance, that it is ſaid to coſt him near twenty Pounds to have an old Days-Man taught it by a *Welch* Brewer, and ſure it was this very Man exceeded all others in theſe Parts afterwards in the Brewing of that which he called his *October* Beer. So likewiſe in *London* they lay ſuch Streſs on this Art, that many have thought it worth their while to give one or two hundred Guineas with an Apprentice: This Conſideration alſo made an Ambaſſador give an extraordinary Encouragement to one of my Acquaintance to go over with him, that was a great Maſter of this Science. But notwithſtanding all that can be ſaid that relates to this Subject, there are ſo many Incidents that attend Malt-Liquors, that

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it has puzled ſeveral expert Men to account for their difference, though brewed by the ſame Brewer, with the ſame Malt, Hops and Water, and in the ſame Month and Town, and tapp'd at the ſame time: The Beer of one being fine, ſtrong and well tatted, while the others have not had any worth drinking, now this may be owing to the different Weather in the ſame Month, that might cauſe an Alteration in the working of the Liquors, or that the Cellar may not be ſo convenient, or that the Water was more diſturbed by Winds or Rains, *&c.* But it has been obſerved that where a Gentleman has employed one Brewer conſtantly, and uſes the ſame Sort of Ingredients, and the Beer kept in dry Vaults or Cellars that have two or three Doors; the Drink has been generally good. And where ſuch Malt-Liquors are kept in Butts, more time is required to ripen, meliorate and fine them, than thoſe kept in Hogſheads, becauſe the greater quantity muſt have the longer time; ſo alſo a greater Quantity will preſerve itſelf better than a leſſer One, and on this Account the Butt and Hogſhead are the two beſt ſized Casks of all others; but all under a Hogſhead hold rather too ſmall a Quantity to keep their Bodies. The Butt is certainly a moſt noble Cask for this Uſe, as being generally ſet upright, whereby it maintains a large Cover of Yeaſt, that greatly contributes to the keeping in the Spirits of the Beer, admits of a moſt convenient broaching in the Middle and its lower Part, and by its broad level Bottom, gives a better lodgment to the fining and preſerving Ingredients, than any other Cask whatſoever that lyes in the long Croſs-form. Hence it partly is, that the common Butt-beer is at this time in greater Reputation than ever in *London*, and the Home-brew'd Drinks out of Credit; becauſe the firſt is better

cured in its Brewing, in its Quantity, in its Cask, and in its Age; when the latter has been loaded with the pernicious Particles of great Quantities of Yeaſt, of a ſhort Age, and kept in ſmall Casks, that confines its Owner, only to Winter Brewing and Sale, as not being capable of ſuſtaining the Heat of the Weather, for that the Acidity of the Yeaſt brings on a ſudden Hardneſs and Staleneſs of the Ale, which to preſerve in its mild Aley Taſte, will not admit of any great Quantity of Hops; and this is partly the Reaſon that the handful of Salt which the *Plymouth* Brewers put to their Hogſhead, hinders their Ale from keeping, as I ſhall hereafter take notice of.

CHAP. VIII.

The London *Method of Brewing.*

IN a great Brewhouſe that I was concern'd in, they wetted or uſed a conſiderable Quantity of Malt in one Week in brewing Stout-Beer, common Butt-Beer, Ale and Small Beer, for which purpoſe they have River and Well-waters, which they take in ſeveral Degrees of Heat, as the Malt, Goods and Grain are in a Condition to receive them, and according to the Practice there I ſhall relate the following Particulars, *viz.*

For Stout Butt-Beer.

This is the ſtrongeſt Butt-beer that is brewed from brown Malt, and often ſold for forty Shillings the Barrel, or ſix Pound the Butt out of the Wholeſale Cellars: The Liquor (for it is Six-

pence

pence forfeit in the *London* Brew-houſe if the Word Water is named) in the Copper deſigned for the firſt Maſh, has a Two-buſhel Basket, or more, of the moſt hully Malt throw'd over it, to cover its Top and forward its boiling; this muſt be made very hot, almoſt ready to boil, yet not ſo as to bliſter, for then it will be in too high a Heat; but as an Indication of this, the foul part of the Liquor will aſcend, and the Malt ſwell up, and then it muſt be parted, look'd into and felt with the Finger or back of the Hand, and if the Liquor is clear and can be but juſt endured, it is then enough, and the Stoker muſt damp his Fire as ſoon as poſſible by throwing in a good parcel of freſh Coals, and ſhutting his Iron Vent-Doors, if there are any; immediately on this they let as much cold Liquor or Water run into the Copper as will make it all of a Heat, ſomewhat more than Blood-warm, this they pump over, or let it paſs by a Cock into an upright wooden ſquare Spout or Trunk, and it directly riſes thro' the Holes of a falſe Bottom into the Malt, which is work'd by ſeveral Men with Oars for about half an Hour, and is called the firſt and ſtiff Maſh: While this is doing, there is more Liquor heating in the Copper that muſt not be let into the Maſh-Tun till it is very ſharp, almoſt ready to boil, with this they maſh again, then cover it with ſeveral Baskets of Malt, and let it ſtand an Hour before it runs into the Under-back, which when boiled an Hour and a half with a good Quantity of Hops makes this Stout. The next is maſh'd with a cooler Liquor, then a ſharper, and the next Blood-warm or quite cold; by which alternate degrees of Heat, a Quantity of Small Beer is made after the Stout.

COMMISSIONERS OF PATENTS FOR INVENTIONS

For Brewing Strong Brown Ale called Stitch.

This is moſt of it the firſt running of the Malt, but yet of a longer Length than is drawn for the Stout; it has but few Hops boiled in it, and is ſold for Eight-pence *per* Gallon at the Brewhouſe out of the Tun, and is generally made to amend the common brown Ale with, on particular Occaſions. This Ale I remember was made uſe of by *Medlicot*, Eſq; in the beginning of a Conſumption, and I heard him ſay, it did him very great Service, for he lived many Years afterwards.

For Brewing Common Brown Ale and Starting Beer.

They take the Liquors from the brown Ale as for the Stout, but draw a greater Quantity from the Malt, than for Stout or Stitch, and after the ſtiff and ſecond Maſh they Cap the Goods with freſh Malt to keep in the Spirit and boil it an Hour; after this, Small Beer is made of the ſame Goods. Thus alſo the common brown Starting Butt-Beer is brewed, only boiled with more Hops an Hour and a half, and work'd cooler and longer than the brown Ale, and a ſhorter Length drawn from the Malt. But it is often practiſed after the brown Ale, and where a Quantity of ſmall Beer is wanted, or that it is to be brewed better than ordinary, to put ſo much freſh Malt on the Goods as will anſwer that Purpoſe.

For Brewing Pale and Amber Ales and Beers.

As the brown Malts are brewed with River, theſe are brewed with Well or Spring Liquors.

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The Liquors are by ſome taken ſharper for pale than brown Malts, and after the firſt ſcalding Liquor is put over; ſome lower the reſt by degrees to the laſt which is quite cold, for their ſmall Beer; ſo alſo for Butt-Beers there is no other Difference than the Addition of more Hops, and boiling, and the Method of working. But the Reaſons for brewing pale Malts with Spring or hard Well-waters, I have mentioned in my ſecond Book of Brewing.

For Brewing Entire Guile Small Beer.

On the firſt Liquor they throw ſome hully Malt to ſhew the break of it, and when it is very ſharp, they let in ſome cold Liquor, and run it into the Tun milk-warm; this is maſh'd with thirty or forty Pulls of the Oar, and let ſtand till the ſecond Liquor is ready, which muſt be almoſt ſcalding hot to the back of the Hand, then run it by the Cock into the Tun, maſh it up and let it ſtand an Hour before it is ſpended off into the Under-back: Theſe two Pieces of Liquor will make one Copper of the firſt Wort, without putting any freſh Malt on the Goods; the next Liquor to be blood-warm, the next ſharp, and the next cool or cold; for the general way in great Brew-houſes is to let a cool Liquor precede a ſharp one, becauſe it gradually opens the Pores of the Malt and Goods, and prepares the way for the hotter Liquor that is to follow.

The ſeveral Lengths or Quantities of Drinks that have been made from Malt, and their ſeveral Prices, as they have been ſold at a common Brew-houſe.

For Stout-Beer, is commonly drawn one Barrel off a Quarter of Malt, and ſold for thirty Shillings

lings *per* Barrel from the Tun. For Stitch or ſtrong brown Ale, one Barrel and a Firkin, at one and twenty Shillings and Four-pence *per* Barrel from the Tun. For common brown Ale, one Barrel and a half or more, at ſixteen Shillings *per* Barrel, that holds thirty two Gallons, from the Tun. For Intire ſmall Beer, five or ſix Barrels off a Quarter, at ſeven or eight Shillings *per* Barrel from the Tun. For Pale and Amber Ale, one Barrel and a Firkin, at one Shilling *per* Gallon from the Tun.

CHAP. IX.

The Country or Private way of Brewing.

SEVERAL Countries have their ſeveral Methods of brewing, as is practiſed in *Wales*, *Dorcheſter*, *Nottingham*, *Oundel*, and many other Places; but avoiding Particulars, I ſhall here recommend that which I think is moſt ſerviceable both in Country and *London* private Families. And firſt, I ſhall obſerve that the great Brewer has ſome Advantages in brewing more than the ſmall one, and yet the latter has ſome Conveniencies which the former can't enjoy; for 'tis certain that the great Brewer can make more Drink and draw a greater Length in Proportion to his Malt, than a Perſon can from a leſſer Quantity, becauſe the greater the Body, the more is its united Power in receiving and diſcharging, and he can brew with leſs Charge and Trouble by means of his more convenient Utenſils. But then the private Brewer is not without his Benefits; for he

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can have have his Malt ground at Pleaſure, his Tubs and moveable Coolers ſweeter and better clean'd than the great fixed Tuns and Backs, he can skim off his top Yeaſt and leave his bottom Lees behind, which is what the great Brewer can't ſo well do; he can at diſcretion make Additions of cold Wort to his too forward Ales and Beers, which the great Brewer can't ſo conveniently do; he can brew how and when he pleaſes, which the great ones are in ſome meaſure hindred from. But to come nearer the matter, I will ſuppoſe a private Family to brew five Buſhels of Malt, whoſe Copper holds brim-full thirty ſix Gallons or a Barrel: On this Water we put half a Peck of Bran or Malt when it is ſomething hot, which will much forward it by keeping the Steams or Spirit of the Water, and when it begins to boil, if the Water is foul, skim off the Bran or Malt and give it the Hogs, or elſe lade both Water and that into the Maſh Vat, where it is to remain till the Steam is near ſpent, and you can ſee your Face in it, which will be in about a quarter of an Hour in cold Weather; then let all but half a Buſhel of the Malt run very leiſurely into it, ſtiring it all the while with an Oar or Paddle, that it may not Ball, and when the Malt is all but juſt mix'd with Water it is enough, which I am ſenſible is different from the old way and the general preſent Practice; but I ſhall here clear that Point. For by not ſtirring or maſhing the Malt into a Pudding Conſiſtence or thin Maſh, the Body of it lies in a more looſe Condition, that will eaſier and ſooner admit of a quicker and more true Paſſage of the After-ladings of the ſeveral Bowls or Jets of hot Water, which muſt run thorough it before the Brewing is ended; by which free Percolation the Water has ready Acceſs to all the parts of the broken

broken Malt, ſo that the Brewer is capacitated to brew quicker or ſlower, and to make more Ale or ſmall Beer; if more Ale, then hot boiling Water muſt be laded over ſo ſlow that one Bowl muſt run almoſt off before another is put over, which will occaſion the whole Brewing to laſt about ſixteen Hours, eſpecially if the *Oundle* Way is followed, of ſpending it out of the Tap as ſmall as a Straw, and as fine as Sack, and then it will be quickly ſo in the Barrel: Or if leſs or weaker Ale is to be made and good ſmall Beer, then the ſecod Copper of boiling Water may be put over expeditiouſly and drawn out with a large and faſt Steam. After the firſt ſtirring of the Malt is done, then put over the Reſerve of half a Buſhel of freſh Malt to the four Buſhels and half that is already in the Tub, which muſt be ſpread all over it, and alſo cover the Top of the Tub with ſome Sacks or other Cloths to keep in the Steam or Spirit of the Malt; then let it ſtand two or three Hours, at the end of which, put over now and then a Bowl of the boiling Water in the Copper as is before directed, and ſo continue to do till as much is run off as will almoſt fill the Copper; then in a Canvas or other looſe woven Cloth, put in half a Pound of Hops and boil them half an Hour, when they muſt be taken out, and as many freſh ones put in their room as is judged proper to boil half an Hour more, if for Ale: But if for keeping Beer, half a Pound of freſh ones ſhould be put in at every half Hour's end, and boil an Hour and a half briskly: Now while the firſt Copper of Wort is boiling, there ſhould be ſcalding Water leiſurely put over the Goods, Bowl by Bowl, and run off, that the Copper may be fill'd again immediately after the firſt is out, and boiled an Hour with near the ſame Quantity of freſh Hops, and in the ſame manner as thoſe in the firſt Copper of

Ale-

Ale-wort were. The reſt for ſmall Beer may be all cold Water put over the Grains at once, or at twice, and boil'd an Hour each Copper with the Hops that have been boil'd before. But here I muſt obſerve, that ſometimes I have not an Opportunity to get hot Water for making all my ſecond Copper of Wort, which obliges me then to make uſe of cold to ſupply what was wanting. Out of five Buſhels of Malt, I generally make a Hogſhead of Ale with the two firſt Coppers of Wort, and a Hogſhead of ſmall Beer with the other two, but this more or leſs according to pleaſe me, always taking care to let each Copper of Wort be ſtrained off thro' a Sieve, and cool in four or five Tubs to prevent its foxing. Thus I have brewed many Hogſheads of middling Ale, that when the Malt is good, has proved ſtrong enough for myſelf and ſatisfactory to my Friends: But for ſtrong keeping Beer, the firſt Copper of Wort may be wholly put to that Uſe, and all the reſt ſmall Beer: Or when the firſt Copper of Wort is intirely made uſe of for ſtrong Beer, the Goods may be help'd with more freſh Malt (according to the *London* Faſhion) and Water lukewarm put over at firſt with the Bowl, but ſoon after ſharp or boiling Water, which may make a Copper of good Ale, and ſmall Beer after that. In ſome Parts of the North, they take one or more Cinders red hot and throw ſome Salt on them to overcome the Sulphur of the Coal, and then directly thruſt it to the freſh Malt or Goods, where it lies till all the Water is laded over and the brewing done, for there is only one or two Maſhings or Stirrings at moſt neceſſary in a Brewing: Others that brew with Wood will quench one or more Brands ends of Aſh in a Copper of Wort to mellow the Drink as a burnt Toaſt of Bread does a Pot of Beer; but it

is to be obſerved, that this muſt not be done with Oak, Fir, or any other ſtrong-ſcented Wood, leſt it does more harm than good.

Another Way.

When ſmall Beer is not wanted, and another Brewing is ſoon to ſucceed the former, then may the laſt ſmall Beer Wort, that has had no Hops boiled in it, remain in the Copper all Night, which will prevent its foxing, and be ready to boil inſtead of ſo much Water to put over the next freſh Malt: This will greatly contribute to the ſtrengthening, bettering and colouring of the next Wort, and is commonly uſed in this manner when Stout or *October* Beer is to be made, not that it is leſs ſerviceable if it was for Ale, or Intire Guile ſmall Beer; but leaſt it ſhould taſte of the Copper by remaining all Night in it, it may be diſperſed into Tubs and kept a Week or more together if ſome freſh cold Water is daily added to it, and may be brewed as I have mentioned, taking particular Care in this as well as in the former Ways to return two, three, or more Hand-bowls of Wort into the Maſh-Tub, that firſt of all runs off, till it comes abſolutely fine and clear, and then it may ſpend away or run off for good: Others will reſerve this ſmall Beer Wort unboiled in Tubs, and keep it there a Week in Winter, or two or three Days in Summer, according to Conveniency, by putting freſh Water every Day to it, and uſe it inſtead of Water for the firſt Maſh, alledging it is better ſo than boiled, becauſe by boiling it is thikened and will cauſe the Wort to run foul; this may be a Benefit to a Victualler that brews to ſell again, and can't vent his ſmall Beer; becauſe for ſuch ſmall raw Wort that is mix'd with any Water, there is no Exciſe to be paid.

For

For Brewing Intire Guile Small Beer.

There can be no way better for making good Small Beer, than by brewing it from freſh Malt, becauſe in Malt as well as in Hops, and ſo in all other Vegetables, there is a Spirituous and Earthy part, as I ſhall further enlarge on in writing of the Hop: Therefore all Drink brewed from Goods or Grains after the firſt or ſecond Worts are run off, is not ſo good and wholeſome, as that intirely brewed from freſh Malt, nor could any thing but Neceſſity cauſe me to make uſe of ſuch Liquor; yet how many thouſands are there in this Nation that know nothing of the matter, tho' it is of no ſmall Importance, and ought to be regarded by all thoſe that value their Health and Taſte. And here I advertiſe every one who reads or hears this, and is capable of being his own Friend, ſo far to mind this *Item*, and prefer that ſmall Beer which is made entirely from freſh Malt, before any other that is brewed after ſtrong Beer or Ale. Now to brew ſuch Guile Small Beer after the boiling Water has ſtood in the Tub till it is clear, put in the Malt leiſurely, and maſh it that it does not Ball or Clot, then throw over ſome freſh Malt on the Top, and Cloths over that, and let it ſtand two Hours before it is drawn off, the next water may be between hot and cold, the next boiling hot, and the next cold; or if conveniency allows not, there may be once ſcalding Water, and all the reſt cold inſtead of the laſt three. Thus I brew my Intire Guile Small Beer, by putting the firſt and laſt Worts together, allowing half, or a Pound of Hops to a Hogſhead and boiling it one Hour, but if the Hops were ſhifted twice in that time, the Drink would plainly diſcover the Benefit. Sometimes, when I have been in haſte for Small

Beer, I have put half a Buſhel of Malt and a few Hops into my Barrel-Copper, and boil'd a Kettle gallop as ſome call it an Hour, and made me a preſent Drink, till I had more leiſure to brew better.

A particular way of Brewing ſtrong October-*Beer.*

There was a Man in this Country that brewed for a Gentleman conſtantly after a very preciſe Method, and that was, as ſoon as he had put over all his firſt Copper of Water and maſh'd it ſome time, he would directly let the Cock run a ſmall ſtream, and preſently put ſome freſh Malt on the former, and maſh on while the Cock was ſpending, which he would put again over the Malt, as often as his Pail or Hand-bowl was full, and this for an Hour or two together; then he would let it run off intirely, and put it over at once, to run off again as ſmall as a Straw. This was for his *October*-Beer: Then he would put ſcalding Water over the Goods at once, but not maſh, and Cap them with more freſh Malt that ſtood an Hour undiſturbed before he would draw it off for Ale; the reſt was hot Water put over the Goods and maſh'd at twice for Small Beer: And it was obſerved that his *October*-Beer was the moſt famous in the Country, but his Grains good for little, for that he had by this metohd waſh'd out all or moſt of their goodneſs; this Man was a long while in brewing, and once his Beer did not work in the Barrel for a Month in a very hard Froſt, yet when the weather broke it recovered and fermented well, and afterwards proved very good Drink, but he ſeldom work'd his Beer leſs than a Week in the Vat, and was never tapp'd under three Years.

This way indeed is attended with extraordinary Labour and Time, by the Brewers running off the

the Wort almoſt continually, and often returning the ſame again into the maſh Vat, but then it certainly gives him an opportunity of extracting and waſhing out the goodneſs of the Malt, more than any of the common Methods, by which he is enabled to make his *October* or *March* Beer as ſtrong as he pleaſes. The Fame of *Penly October* Beer is at this time well known not only throughout *Hertfordſhire*, but ſeveral other remote Places, and truly not without reaſon, for in all my Travels I never met with any that excell'd it, for a clear amber Colour, a fine reliſh, and a light warm digeſtion. But what excell'd all was the generoſity of its Donor, who for Hoſpitality in his Viands and this *October*-Beer, has left but few of his Fellows. I remember his uſual Expreſſion to be, You are welcome to a good Batch of my *October*, and true it was, that he proved his Words by his Deeds, for not only the rich but even the poor Man's Heart was generally made glad, even in advance whenever they had Buſineſs at *Penly*, as expecting a refreſhment of this Cordial Malt Liquor, that often was accompanied with a good Breakfaſt or Dinner beſides, while ſeveral others that had greater Eſtates would ſeem generous by giving a Yeoman his Neighbour, the mere Philoſophical Treat of a look on the Spit, and a ſtanding Drink at the Tap.

Of Brewing Moloſſes Beer.

Moloſſes or Treacle has certainly been formerly made too much uſe of in the brewing of Stout Beer, common Butt Beers, Brown Ales and Small Beer when Malts have been dear: But it is now prohibited under the Penalty of fifty Pounds for every ten Pounds weight found in any common Brewhouſe, and as Malts are now about twenty

ty Shillings *per* Quarter, and like to be ſo by the Bleſſing of God, and the Aſſiſtance of that invaluable excellent Liquor for ſteeping Seed-Barley in, publiſhed in a late Book intituled, *The Practice of Farming and Husbandry.* There is no great danger of that Compoſition being riſe again, which in my Opinion was very unwholeſome, becauſe the Brewer was obliged to put ſuch a large Quantity of Treacle into his Water or ſmall Wort to make it ſtrong Beer or Ale, as very probably raiſed a ſweating in ſome degree in the Body of the Drinker: Tho' in ſmall Beer a leſſer Quantity will ſerve; and therefore I have known ſome to brew it in that for their Healths ſake, becauſe this does not breed the Scurvy like Malt-liquors, and at the ſame time will keep open the Pipes and Paſſages of the Lungs and Stomach, for which purpoſe they put in nine Pounds weight into a Barrel-Copper of cold Water, firſt mixing it well, and boiling it briskly with a quarter of a Pound of Hops or more one Hour, ſo that it may come off twenty ſeven Gallons.

A Method practiſed by a Victualler for Brewing of Ale or October *Beer from* Nottingham.

His Copper holds twenty four Gallons, and the Maſh Tub has room enough for four and more Buſhels of Malt. The firſt full Copper of boiling Water he puts into the Maſh Tub, there to lye a quarter of an Hour, till the ſteam is ſo far ſpent, that he can ſee his Face in it, or as ſoon as the hot Water is put in, throws a Pail or two of cold Water into it, which will bring it at once into a temper; then he lets three Buſhels of Malt be run leiſurely into it, and ſtirred or maſh'd all the while, but as little as can be, or no more than juſt to keep the Malt from clotting ar balling; when

that

that is done, he puts one Buſhel of dry Malt on the Top to keep in the Vapour or Spirit, and ſo lets it ſtand covered two Hours, or till the next Copper full of Water is boiled hot, which he lades over the Malt or Goods three Hand-bowls full at a time, that are to run off at the Cock or Tap by a very ſmall ſtream before more is put on, which again muſt be returned into the Maſh Tub till it comes off exceeding fine, for unleſs the Wort is clear when it goes into the Copper, there are little hopes it will be ſo in the Barrel, which leiſure way obliges him to be ſixteen Hours in brewing theſe four Buſhels of Malt. Now between the Ladings over he puts cold Water into the Copper to be boiling hot, while the other is running off; by this means his Copper is kept up near full, and the Cock ſpending to the end of brewing his Ale or Small-beer, of which only twenty one Gallons muſt be ſaved of the firſt Wort that is reſerved in a Tub, wherein four Ounces of Hops are put, and then it is to be ſet by. For the ſecond Wort I will ſuppoſe there are twenty Gallons of Water in the Copper boiling hot, that muſt be all laded over in the ſame manner as the former was, but no cold Water need here be mixed; when half of this is run out into a Tub, it muſt be directly put into the Copper with half of the firſt Wort, ſtrain'd thro' the Brewing Sieve as it lies on a ſmall looſe wooden Frame over the Copper, to keep back thoſe Hops that were firſt put in to preſerve it, which is to make the firſt Copper twenty one Gallons; then upon its beginning to boil he puts in a Pound of Hops in one or two Canvas or other coarſe Linnen Bags, ſomewhat larger than will juſt contain the Hops, that an allowance may be given for their ſwell; this he boils away very briskly for half an Hour, when he takes the Hops out and continues boiling the Wort

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by itſelf till it breaks into Particles a little ragged, and then it is enough and muſt be diſpers'd into the Cooling Tubs very thin: Then put the remainder of the firſt and ſecond Wort together and boil that, the ſame time, in the ſame manner, and with the ſame quantity of freſh Hops the firſt was. The reſt of the third or Small-beer Wort will be about fifteen or twenty Gallons more or leſs, he mixes directly with ſome cold Water to keep it free of Exciſe, and puts it into the Copper as the firſt Liquor to begin a ſecond Brewing of Ale with another four Buſhels of Malt as he did before, and ſo on for ſeveral Days together if neceſſary; but at laſt there may be ſome Small-beer made, tho' ſome will make none, becauſe the Goods or Grains will go the further in feeding of Hogs.

Obſervations on the foregoing Method.

The firſt Copper of twenty four Gallons of water is but ſufficient to wet three Buſhels of Malt, and by the additions of cold water as the hot is expended, it matters not how much the Malt drinks up: Tho' a third part of water is generally allowed for that purpoſe that is never returned.

By the leiſure putting over the Bowls of water, the goodneſs of the Malt is the more extracted and waſhed out, ſo that more Ale may be this way made and leſs Small-beer, than if the Wort was drawn out haſtily; beſides the Wort has a greater opportunity of coming off finer by a ſlow ſtream than by a quicker one, which makes this Method excel all others that diſcharge the Wort out of the Maſh Tub more haſtily. Alſo by the continual running of the Cock or Tap, the Goods or Grains are out of danger of ſowering, which often happens in Summer brewings, eſpecially

ally when the Cock is ſtopt between the ſeveral boilings of the Wort, and what has been the very Cauſe of damaging or ſpoiling many Guiles of Drink.

This Brewer repoſes ſuch a Confidence in the Hops to preſerve the Wort from fixing even in the very hotteſt time in Summer, that he puts all his firſt running into one Tub, till he has an opportunity of boiling it, and when Tubs and Room are ſo ſcarce that the Wort is obliged to be laid thick to cool, then the ſecurity of ſome freſh Hops (and not them already boiled and ſoak'd) may be put into it, which may be got out again by letting the Drink run thro' the Cullender, and after that a Hair Sieve to keep the Seeds of the Hop back as the Drink goes into the Barrel: But this way of putting Hops into the cooling Tubs is only meant where there is a perfect Neceſſity, and Tubs and Room enough can't be had to lay the Wort thin.

By this Method of brewing, Ale may be made as ſtrong or as ſmall as is thought fit, and ſo may the Small-beer that comes after, and is ſo agreeable that this Brewer makes his Ale and ſtrong keeping *October* Beer, all one and the ſame way, only with this difference, that the latter is ſtronger and more hopp'd than the former. Where little or no Small-beer is wanted, there may little or none be brewed, according to this manner of working, which is no ſmall Conveniency to a little Family that uſes more ſtrong than ſmall, nor is there any Loſs by leaving the Grains in ſome Heart, where Horſe, Cows, Hogs, or Rabbits are kept.

I am very ſenſible that the Vulgar Error for many Years, has been a ſtandard Sign to the Ignorant of boiling ſtrong Worts only till they break or curdle in the Copper, which ſometimes will be in three quarters of an Hour, or in an Hour or more,

according to the nature of the Malt and Water; but from theſe in ſome meaſure I diſſent, and alſo from thoſe that boil it two or three Hours, for it is certain the longer Worts boil, the thicker they are made, becauſe the watry or thin parts evaporate firſt away, and the thicker any Drink is boiled, the longer it requires to lye in the Barrel to have its Particles broke, which Age muſt be then the ſole cauſe of, and therefore I have fixed the Time and Sign to know when the Wort is truly enough, and that in ſuch a manner that an ordinary Capacity may be a true judge of, which hereafter will prevent prodigious Loſſes in the waſte of ſtrong Worts that have often been boiled away to greater Loſs than Profit.

I have here alſo made known, I think, the true method of managing the Hop in the Copper, which has long wanted adjuſting, to prevent the great damage that longer boilings of them has been the ſole occaſion of to the ſpoiling of moſt of our malt drinks brewed in this Nation.

CHAP. X.

The Nature and Uſe of the Hop.

THIS Vegetable has ſuffered its degradation, and raiſed its Reputation the moſt of any other. It formerly being thought an unwholeſome Ingredient, and till of late a great breeder of the Stone in the Bladder, but now that falacious Notion is obviated by Dr. *Quincy* and others, who have proved that Malt Drink much tinctured by the Hop, is leſs prone to do that miſchief, than Ale that has fewer boiled in it. Indeed when the

Hop

Hop in a dear time is adulterated with Water, in which Aloes, *&c.* have been infuſed, as was practiſed it is ſaid about eight Years ago to make the old ones recover their bitterneſs and ſeem new, then they are to be looked on as unwholeſome; but the pure new Hop is ſurely of a healthful Nature, compoſed of a ſpirituous flowery part, and a phlegmatick terrene part, and with the beſt of the Hops I can either make or mar the brewing, for if the Hops are boiled in ſtrong or ſmall Worts beyond their fine and pure Nature, the Liquor ſuffers, and will be tang'd with a noxious taſte both ungrateful and unwholeſome to the Stomach, and if boiled to a very great Exceſs, they will be apt to cauſe Reachings and diſturb a weak Conſtitution. It is for theſe reaſons that I adviſe the boiling two Parcels of freſh Hops in each Copper of Ale-wort, and if there were three for keeping Beer, it would be ſo much the better for the taſte, health of Body, and longer Preſervation of the Beer in a ſound ſmooth Condition. And according to this, one of my Neighbours made a Bag like a Pillow-bear of the ordinary ſix-penny yard Cloth, and boil'd his Hops in it half an Hour, then he took them out, and put in another Bag of the like quantity of freſh Hops and boiled them half an Hour more, by which means he had an opportunity of boiling both Wort and Hops their due time, ſav'd himſelf the trouble of ſtraining them through a Sieve, and ſecured the Seeds of the Hops at the ſame time from mixing with the Drink, afterwards he boiled the ſame Bags in his Small-beer till he got the goodneſs of it out, but obſerve that the Bags were made bigger than what would juſt contain the Hops, otherwiſe it will be difficult to boil out their goodneſs. It's true, that here is a Charge encreaſed by the Conſumption of a greater quantity of Hops than uſu-

al, but then how greatly will they anſwer the deſired end of enjoying fine palated wholeſome drink, that in a cheap time will not amount to much if bought at the beſt Hand; and if we conſider their after-uſe and benefit in Small-beer, there is not any loſs at all in their Quantity: But where it can be afforded, the very Small-beer would be much improved if freſh Hops were alſo ſhifted in the boiling of this as well as the ſtronger Worts, and then it would be neighbourly Charity to give them away to the poorer Perſon. Hence may appear the Hardſhip that many are under of being neceſſitated to drink of thoſe Brewers Malt Liquors, who out of avarice boil their Hops to the laſt, that they may not loſe any of their quinteſſence: Nay, I have known ſome of the little Victualling Brewers ſo ſtupendiouſly ignorant, that they have thought they acted the good Husband, when they have ſqueezed the Hops after they have been boiled to the laſt in Small-beer, to get out all their goodneſs as they vainly imagin'd, which is ſo reverſe to good management, that in my Opinion they had much better put ſome ſort of Earth into the Drink, and it would prove more pleaſant and wholeſome. And why the Small-beer ſhould be in this manner (as I may juſtly call it) ſpoiled for want of the trifling Charge of a few freſh Hops, I am a little ſurprized at, ſince it is the moſt general Liquor of Families, and therefore as great Care is due to it as any in its brewing, to enjoy it in a pure and wholeſome Order.

After the Wort is cooled and put into the working Vat or Tub, ſome have thrown freſh Hops into it, and work'd them with the Yeaſt, at the ſame time reſerving a few Gallons of raw wort to waſh the Yeaſt thro' a Sieve to keep back the Hop. This is a good way where Hops enough have not been

been ſufficiently boiled in the wort, or to preſerve it in the Coolers where it is laid thick, otherwiſe I think it needleſs.

When Hops have been dear, many have uſed the Seeds of Wormwood, that they buy in the *London* Seed-Shops inſtead of them: Others *Daucus* or wild Carrot Seed, that grows in our common Fields, which many of the poor People in this Country gather and dry in their Houſes againſt their wanting of them: Others that wholeſome Herb *Horehound*, which indeed is a fine Bitter, and grows on ſeveral of our Commons.

But before I conclude this Article, I ſhall take notice of a Country Bite, as I have already done of a *London* one, and that is, of an Arch Fellow that went about to brew for People, and took his opportunity to ſave all the uſed Hops that were to be thrown away, theſe he waſhed clean, then would dry them in the Sun, or by the Fire, and ſprinkle the Juice of *Horehound* on them, which would give them ſuch a greeniſh colour and bitteriſh taſte, that with the help of the Screw-preſs he would ſell them for new Hops.

Hops in themſelves are known to be a ſubtil grateful Bitter, whoſe Particles are Active and Rigid, by which the viſcid ramous parts of the Malt are much divided, that makes the Drink eaſy of Digeſtion in the Body; they alſo keep it from running into ſuch Coheſions as would make it ropy, vapid and ſour, and therefore are not only of great uſe in boiled, but in raw Worts to preſerve them ſound till they can be put into the Copper, and afterwards in the Tun while the Drink is working, as I have before hinted.

Here then I muſt obſerve, that the worſt of all the earthy parts of the Hop is greatly the cauſe of that rough, harſh unpleaſant taſte, which accompany both Ales and Beers that have the Hops

ſo

ſo long boiled in them as to taint their worts with their miſchievous Effects; for notwithſtanding the malt be ever ſo good, the Hops, if boiled too long in them, will be ſo predominant as to cauſe a naſty bad taſte, and therefore I am in hopes our Malt-Liquors in general will be in great Perfection, when Hops are made uſe of according to my Directions, and alſo that more Grounds will be planted with this moſt ſerviceable Vegetable than ever, that their Dearneſs may not be a diſencouragement to this excellent Practice.

For I know an Alehouſe-keeper and Brewer, who, to ſave the expence of Hops that were then two Shillings *per* Pound, uſe but a quarter inſtead of a Pound, the reſt he ſupplied with *Daucus* Seeds; but to be more particular, in a Mug of this Perſon's Ale I diſcover'd three ſeveral Impoſitions. *Firſt*, He underboil'd his Wort to ſave its Conſumption. *Secondly*, He boiled this Seed inſtead of the Hop; and *Thirdly*, He beat the Yeaſt in for ſome time to encreaſe the ſtrength of the Drink; and all theſe in ſuch a *Legerdemain* manner as gull'd and infatuated the ignorant Drinker to ſuch a degree as not to ſuſpect the Fraud, and that for theſe three Reaſons: *Firſt*, The underboil'd wort being of a more ſweet taſte than ordinary, was eſteemed the Produce of a great allowance of Malt. *Secondly*, The *Daucus* Seed encreaſed their approbation by the fine Peach flavour or reliſh that it gives the Drink; and *Thirdly*, The Yeaſt was not ſo much as thought of, ſince they enjoy'd a ſtrong heady Liquor. Theſe artificial Qualities, and I think I may ſay unnatural, have been ſo prevalent with the Vulgar, who were his chief Cuſtomers, that I have known this Victualler have more Trade for ſuch Drink than his Neighbours, who had much more wholeſome at the ſame time; for the *Daucus* Seed, tho' it is a Car-

Carminative, and has ſome other good Properties, yet in the unboil'd wort it is not capable of doing the Office of the Hop, in breaking thro' the clammy parts of it; the Hop being full of ſubtil penetrating Qualities, a Strengthener of the Stomach, and makes the Drink agreeable, by oppoſing Obſtructions of the *Viſcera*, and particularly of the Liver and Kidneys, as the Learned maintain, which confutes the old Notion, that Hops are a Breeder of the Stone in the Bladder.

CHAP. XI.

ALTHO' I have ſaid an Hour and a half is requiſite for boiling *October* Beer, and an Hour for Ales and Small-beer; yet it is to be obſerved, that an exact time is not altogether a certain Rule in this Caſe with ſome Brewers; for when looſe Hops are boiled in the wort ſo long till they all ſink, their Seeds will riſe and fall down again; the wort alſo will be curled, and broke into ſmall Particles if examin'd in a Hand-bowl, but afterwards into larger, as big as great Pins Heads, and will appear clean and fine at the Top. This is ſo much a Rule with ſome, that they regard not Time, but this Sign to ſhew when the Wort is boiled enough; and this will happen ſooner or later according to the Nature of the Barley and its being well malted; for if it comes off Chalks or Gravels, it generally has the good Property of breaking or curdling ſoon; but if of tough Clays, then it is longer, which by ſome Perſons is not a little valued, becauſe it ſaves time in boiling, and conſequently the Conſumption of the Wort.

It is alſo to be obſerved, that pale Malt Worts will not break ſo ſoon in the Copper, as the brown Sorts, but when either of their Worts boil, it ſhould be to the purpoſe, for then they will break ſooner and waſte leſs than if they are kept Simmering, and will likewiſe work more kindly in the Tun, drink ſmoother, and keep longer.

Now all Malt Worts may be ſpoiled by too little or too much boiling; if too little, then the Drink will always taſte raw, mawkiſh, and be unwholeſome in the Stomach, where, inſtead of helping to dilute and digeſt our Food, it will cauſe Obſtructions, Cholicks, Head-aches, and other Misfortunes; beſides, all ſuch underboil'd Drinks are certainly expoſed to ſtaleneſs and ſourneſs, much ſooner than thoſe that have had their full time in the Copper. And if they are boiled too long, they will then thicken (for one may boil a Wort to a Salve) and not come out of the Copper fine and in a right Condition, which will cauſe it never to be right clear in the Barrel; an *Item* ſufficient to ſhew the miſtake of all thoſe that think to excel in Malt Liquors, by boiling them two or three Hours, to the great ſpoiling of the Wort, and doing more harm than good to the Drink.

But to be more particular in thoſe two Extreams, it is my Opinion, as I have ſaid before, that no Ale Worts boiled leſs than an Hour can be good, becauſe in an Hour's time they cannot acquire a thickneſs of Body any ways detrimental to them, and in leſs than an Hour the ramous viſcid parts of the Ale cannot be ſufficiently broke and divided, ſo as to prevent it running into Coheſions, Ropineſs and Soureneſs, becauſe in Ales there are not Hops enough allowed to do this, which good boiling muſt in a great meaſure ſupply, or elſe ſuch Drink I am ſure can never be a-

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greeable to the Body of Man; for then its cohesive Parts being not thoroughly broke and commiuted by time and boiling, remain in a hard texture of Parts, which consequently obliges the Stomach to work more than ordinary to digest and secrete such parboil'd Liquor, that time and fire should have cured before: Is not this apparent in half-boil'd Meats, or under-bak'd Bread, that often causes the Stomach a great fatigue to digest, especially in those of a sedentary Life; and if that suffers, 'tis certain the whole Body must share in it: How ignorant then are those People, who, in tippling of such Liquor, can praise it for excellent good Ale, as I have been an Eye-witness of, and only because its taste is sweetish, (which is the nature of such raw Drinks) as believing it to be the pure Effects of the genuine Malt, not perceiving the Landlord's Avarice and Cunning to save the Consumption of his Wort by shortness of boyling, tho' to the great prejudice of the Drinker's Health; and because a Liquid does not afford such a plain ocular Demonstration, as Meat and Bread does, these deluded People are taken into an Approbation of indeed an *Ignis fatuus*, or what is not.

To come then to the *Crisis* of the Matter, both Time and the Curdling or breaking of the Wort should be consulted; for if a Person was to boil the Wort an Hour, and then take it out of the Copper, before it was rightly broke, it would be wrong management, and the Drink would not be fine nor wholesome; and if it should boil an Hour and a half, or two Hours, without regarding when its Particles are in a right order, then it may be too thick, so that due Care must be had to the two extreams to obtain it its due order; therefore in *October* and keeping Beers, an Hour and a quarter's good boiling is commonly sufficient to have a thorough cured Drink, for generally in that

time it will break and boil enough, and becauſe in this there is a double Security by length of boiling, and a quantity of Hops ſhifted; but in the new way there is only a ſingle one, and that is by a double or treble allowance of freſh Hops boiled only half an Hour in the Wort, and for this Practice a Reaſon is aſſigned, that the Hops being endowed with diſcutient apertive Qualities, will by them and their great quantity ſupply the Defect of underboiling the Wort; and that a further Conveniency is here enjoyed by having only the fine wholeſome ſtrong flowery ſpirituous Parts of the Hop in the Drink, excluſive of the phlegmatick naſty earthy Parts which would be extracted if the Hops were to be boiled above half an Hour; and therefore there are many now, that are ſo attach'd to this new Method, that they won't brew Ale or *October* Beer any other way, vouching it to be a true Tenet, that if Hops are boiled above thirty Minutes, the Wort will have ſome more or leſs of their ill Qualities.

The allowance of Hops for Ale or Beer, cannot be exactly adjuſted without coming to Particulars, becauſe the Proportion ſhould be according to the nature and quality of the Malt, the Seaſon of the Year it is brew'd in, and the length of time it is to be kept.

For ſtrong brown Ale brew'd in any of the Winter Months, and boiled an Hour, one Pound is but barely ſufficient for a Hogſhead, if it be tapp'd in three Weeks or a Month.

If for pale Ale brewed at that time and for that Age, one Pound and a quarter of Hops; but if theſe Ales are brewed in any of the Summer Months, there ſhould be more Hops allowed.

For *October* or *March* brown Beer, a Hogſhead made from Eleven Buſhels of Malt, boiled an Hour and a quarter to be kept nine Months, three Pounds

Pounds and a half ought to be boiled in ſuch Drink at the leaſt.

For *October* or *March*, pale Beer made from fourteen Buſhels, boiled an Hour and a quarter, and kept Twelve Months, ſix Pound ought to be allowed to a Hogſhead of ſuch Drink, and more if the Hops are ſhifted in two Bags, and leſs time given the Wort to boil.

Now thoſe that are of Opinion, that their Beer and Ales are greatly improved by boiling the Hops only half an Hour in the Wort, I join in Sentiment with them, as being very ſure by repeated Experience it is ſo, but I muſt here take leave to diſſent from thoſe that think that half an Hour's boiling the Wort is full enough for making right ſound and well reliſhed Malt Drinks; however of this I have amply and more particularly wrote in my Second Book of Brewing in Chapter IV, where I have plainly publiſh'd the true Sign or Criterion to know when the Wort is boiled juſt enough, and which I intend to publiſh in a little time.

CHAP. XII.

Of Foxing or Tainting Malt Liquors.

FOXING is a misfortune, or rather a Diſeaſe in Malt Drinks, occaſioned by divers Means, as the Naſtineſs of the Utenſils, putting the Worts too thick together in the Backs or Cooler, brewing too often and ſoon one after another, and ſometimes by bad Malts and Waters, and the Liquors taken in wrong Heats, being of ſuch pernicious Conſequence to the great Brewer in parti-

cular, that he ſometimes cannot recover and bring his Matters into a right Order again under a Week or two, and is ſo hateful to him in its very Name, that it is a general Law among them to make all Servants that name the word *Fox* or *Foxing* in the Brewhouſe to pay Sixpence, which obliges them to call it *Reynards*; for when once the Drink is tainted, it may be ſmelt at ſome diſtance ſomewhat like a *Fox*; It chiefly happens in hot weather, and cauſes the Beer and Ale ſo tainted to acquire a fulſome ſickiſh taſte, that will if it is received in a great degree become ropy like Treacle, and in ſome ſhort time turn ſour. This I have known ſo to ſurprize my Small-beer Cuſtomers, that they have asked the Drayman what was the matter: He to act in his Maſter's Intereſt tells them a Lye, and ſays it is the goodneſs of the Malt that cauſes that ſweetiſh mawkiſh taſte, and then would brag at home how cleverly he came off. I have had it alſo in the Country more than once, and that by the Idleneſs and Ignorance of my Servant, who when a Tub has been wrinced out only with fair Water, has ſet it by for a clean one, but this won't do with a careful Maſter, for I obblige him to clean the Tub with a Hand-bruſh, Aſhes, or Sand every Brewing, and ſo that I cannot ſcrape any Dirt up under my Nail. However as the Cure of this Diſeaſe has baffled the Efforts of many, I have been tempted to endeavour the finding out a Remedy for the great Malignity, and ſhall deliver the beſt I know on this Score.

And here I ſhall mention the great Value of the Hop in preventing and curing the Fox in Malt Liquors. When the Wort is run into the Tub out of the Maſhig Vat, it is a very good way to throw ſome Hops directly into it before it is put into the Copper, and they will ſecure it againſt Sour-

Sourneſs and Ropineſs, that are the two Effects of fox'd Worts or Drinks, and is of ſuch Power in this reſpect, that raw Worts may be kept ſome time, even in hot weather, before they are boiled, and which is neceſſary where there is a large Quantity of Malt uſed to a little Copper; but it is certain that the ſtronger worts will keep longer with Hops than the ſmaller Sorts: So likewiſe if a Perſon has fewer Tubs than are wanting, and he is apprehenſive his worts will be fox'd by too thick lying in the Coolers or working Tubs, then it will be a ſafe way to put ſome freſh Hops into ſuch Tubs and work them with the Yeaſt as I have before hinted; or in caſe the Drink is already foxed in the Vat or Tun, new Hops ſhould be put in and work'd with it, and they will greatly fetch it again into a right Order; but then ſuch Drink ſhould be carefully taken clear off from its groſs naſty Lee, which being moſtly Tainted, would otherwiſe lye in the Barrel, corrupt and make it worſe.

Some will ſift quick Lime into foxed Drinks while they are working in the Tun or Vat, that its Fire and Salts may break the Coheſions of the Beer or Ale, and burn away the ſtench, that the Corruption would always cauſe; but then ſuch Drink ſhould by a Peg at the bottom of the Vat be drawn off as fine as poſſible, and the Dregs leſt behind.

There are many that do not conceive how their Drinks become Fox'd and Tainted for ſeveral Brewings together; but I have in Chapter VI, in my Second Book, made it appear, that the Taint is chiefly retain'd and lodged in the upright wooden Pins that faſten the Planks to the Joiſts, and how ſcalding Lee is a very efficacious Liquor to extirpate it out of the Utenſils in a little time if rightly applied; and one other moſt powerful

ful Ingredient that is now uſed by the greateſt Artiſts for curing of the ſame.

CHAP. XIII.

Of fermenting and working of Beers and Ales, and the pernicious Practice of Beating in the Yeaſt detected.

THIS Subject in my Opinion has long wanted a Satyrical Pen to ſhew the ill Effects of this unwholeſome Method, which I ſuppoſe has been much diſcouraged and hindered hitherto, from the general uſe it has been under many Years, eſpecially by the *Northern* Brewers, who, tho' much famed for their Knowledge in this Art, and have induced many others by their Example in the *Southern* and other Parts to purſue their Method; yet I ſhall endeavour to prove them culpable of Male-practice, that beat in the Yeaſt, as ſome of them have done a Week together; and that Cuſtom ought not to authorize an ill Practice. *Firſt*, I ſhall obſerve that Yeaſt is a very ſtrong acid, that abounds with ſubtil ſpirituous Qualities, whoſe Particles being wrapped up in thoſe that are viſcid, are by a mixture with them in the Wort, brought into an inteſtine Motion, occaſion'd by Particles of different Gravities; for as the ſpirituous Parts of the Wort will be continually ſtriving to get up to the Surface, the glutinous adheſive ones of the Yeaſt will be as conſtant in retarding their aſſent, and ſo prevent their Eſcape; by which the ſpirituous Particles are ſet looſe and free from their viſcid Confinements, as may appear by the Froth on the Top, and to this end a mo-

moderate warmth haſtens the Operation, as it aſſiſts in opening the viſcidities in which ſome ſpirituous Parts may be entangled, and unbends the Spring of the included Air: The viſcid Parts which are raiſed to the Top, not only on account of their own lightneſs, but by the continual efforts and occurſions of the Spirits to get uppermoſt, ſhew when the ferment is at the higheſt, and prevent the finer Spirits making their eſcape; but if this inteſtine Operation is permitted to continue too long, a great deal will get away, and the remaining grow flat and vapid, as Dr. *Quincy* well obſerves.

Now tho' a ſmall quantity of Yeaſt is neceſſary to break the Band of Corruption in the Wort, yet it is in itſelf of a poiſonous Nature, as many other Acids are; for if a Plaiſter of thick Yeaſt be applied to the Wriſt as ſome have done for an Ague, it will there raiſe little Puſtles or Bliſters in ſome degree like that Venomous! (as I have juſt reaſon in a particular Senſe to call it) Ingredient *Cantharides*, which is one of the Shop Poiſons. Here then I ſhall obſerve, that I have known ſeveral beat the Yeaſt into the Wort for a Week or more together to improve it, or in plainer terms to load the Wort with its weighty and ſtrong ſpirituous Particles; and that for two Reaſons, *Firſt*, Becauſe it will make the Liquor ſo heady, that five Buſhels of Malt may be equal in ſtrength to ſix, and that by the ſtupifying Narcotick Qualities of the Yeaſt; which mercenary Subtilty and Impoſition has ſo prevailed to my Knowledge with the Vulgar and Ignorant, that it has cauſed many of them to return the next Day to the ſame Alehouſe, as believing they had ſtronger and better Drink than others: But alas, how are ſuch deceived that know no other than that it is the pure Product of the Malt, when at the ſame time they are driving

Nails

Nails into their Coffins, by impregnating their Blood with the corrupt Qualities of this poiſonous Acid, as many of its Drinkers have proved, by ſuffering violent Head-aches, loſs of Appetite, and other Inconveniencies the Day following, and ſometimes longer, after a debauch of ſuch Liquor; who would not perhaps for a great Reward ſwallow a Spoonful of thick Yeaſt by itſelf, and yet without any concern may receive for ought they know ſeveral, diſſolved in the Vehicle of Ale, and then the corroſive Corpuſcles of the Yeaſt being mix'd with the Ale, cannot fail (when forſaken in the Canals of the Body of their Vehicle) to do the ſame miſchief as they would if taken by themſelves undiluted, only with this Difference, that they may in this Form be carried ſometimes further in the animal Frame, and ſo diſcover their malignity in ſome of the inmoſt Receſſes thereof, which alſo is the very Caſe of malignant Waters, as a moſt learned Doctor obſerves.

Secondly, They alledge for beating the Yeaſt into Wort, that it gives it a fine tang or reliſh, or as they call it at *London*, it makes the Ale bite off the Yeaſt; but this flouriſh indeed is for no other reaſon than to further its Sale, and tho' it may be agreeable to ſome Bigots, to me it proves a diſcovery of the Infection by its nauſeous taſte; however my Surprize is leſſen'd, when I remember the *Plymouth* People, who are quite the reverſe of them at *Dover* and *Chatham*; for the firſt are ſo attach'd to their white thick Ale, that many have undone themſelves by drinking it; nor is their humour much different as to the common Brewers brown Ale, who when the Cuſtomer wants a Hogſhead, they immediately put in a Handful of Salt and another of Flower, and ſo bring it up, this is no ſooner on the Stilling but often Tapp'd, that it may carry a Froth on the Top of the Pot,

other-

otherwiſe they deſpiſe it: The Salt commonly anſwered its End of cauſing the Tiplers to become dryer by the great Quantities they drank, that it farther excited by the biting pleaſant ſtimulating quality the Salt ſtrikes the Palate with. The Flower alſo had its ſeducing ſhare by pleaſing the Eye and Mouth with its mantling Froth, ſo that the Sailors that are often here in great Numbers uſed to conſume many Hogſheads of this common Ale with much delight, as thinking it was intirely the pure Product of the Malt.

Their white Ale is a clear Wort made from pale Malt, and fermented with what they call ripening, which is a Compoſition, they ſay, of the Flower of Malt, Yeaſt and Whites of Eggs, a *Noſtrum* made and ſold only by two or three in thoſe Parts, but the Wort is brewed and the Ale vended by many of the Publicans, which is drank while it is fermenting in Earthen Steens, in ſuch a thick manner as reſembles butter'd Ale, and ſold for Twopence Halfpenny the full Quart. It is often preſcribed by Phyſicians to be drank by wet Nurſes for the encreaſe of their Milk, and alſo as a prevalent Medicine for the Cholick and Gravel. But the *Dover* and *Chatham* People won't drink their Butt-Beer, unleſs it is Aged, Fine and Strong.

Of working and fermenting London *Stout Beer and Ale.*

In my Brewhouſe at *London*, the Yeaſt at once was put into the Tun to work the Stout Beer and Ale with, as not having the Conveniency of doing otherwiſe, by reaſon the After-worts of Small-beer come into the ſame Backs or Coolers where the ſtrong Worts had juſt been, by this means, and the ſhortneſs of time we have to ferment our

ſtrong Drinks, we cannot make Reſerves of cold Worts to mix with and check the too forward working of thoſe Liquors, for there we brewed three times a Week throughout the Year, as moſt of the great ones do in *London*, and ſome others five times. The ſtrong Beer brewed for keeping is ſuffered to be blood-warm in the Winter when the Yeaſt is put into it, that it may gradually work two Nights and a Day at leaſt, for this won't admit of ſuch a haſty Operation as the common brown Ale will, becauſe if it is work'd too warm and haſty, ſuch Beer won't keep near ſo long as that fermented cooler. The brown Ale has indeed its Yeaſt put into it in the Evening very warm, becauſe they carry it away the very next Morning early to their Cuſtomers, who commonly draw it out in leſs than a Week's time. The Pale or Amber Ales are often kept near it, not quite a Week under a fermentation, for the better incorporating the Yeaſt with Wort, by beating it in ſeveral times for the foregoing Reaſons.

Of working or fermenting Drinks brewed by Private Families.

I mean ſuch who brew only for their own Uſe, whether it be a private Family or a Victualler. In this Caſe be it for Stout Beers, or for any of the Ales; the way that is uſed in *Northamptonſhire*, and by good Brewers elſewhere; is, to put ſome Yeaſt into a ſmall quantity of warm Wort in a Hand-bowl, which for a little while ſwims on the Top, where it works out and leiſurely mixes with the Wort, that is firſt quite cold in Summer, and almoſt ſo in Winter; for the cooler it is work'd the longer it will keep, too much Heat agitating the ſpirituous Particles into too quick a motion, whereby they ſpend themſelves too faſt, or fly a-

way

way too ſoon, and then the Drink will certainly work into a bliſter'd Head that is never natural; but when it ferments by moderate degrees into a fine white curl'd Head, its Operation is then truly genuine, and plainly ſhews the right management of the Brewer. To one Hogſhead of Beer, that is to be kept nine Months, I put a Quart of thick Yeaſt, and ferment it as cool as it will admit of, two Days together, in *October* or *March*, and if I find it works too faſt, I check it at leiſure by ſtirring in ſome raw Wort with a Hand-bowl: So likewiſe in our Country Ales we take the very ſame method, becauſe of having them keep ſometime, and this is ſo nicely obſerved by ſeveral, that I have ſeen them do the very ſame by their Small-beer Wort; now by theſe ſeveral Additions of raw Wort, there are as often new Commotions raiſed in the Beer or Ale, which cannot but contribute to the rarefaction and comminution of the whole; but whether it is by theſe joining Principles of the Wort and Yeaſt, that the Drink is rendered ſmoother, or that the ſpirituous Parts are more entangled and kept from making their Eſcape, I can't determine; yet ſure it is, that ſuch ſmall Liquors generally ſparkle and knit out of the Barrel as others out of a Bottle, and is as pleaſant Ale as ever I drank.

Others again for Butt or Stout Beer will, when they find it works up towards a thick Yeaſt, mix it once and beat it in again with the Hand-bowl or Jett; and when it has work'd up a ſecond time in ſuch a manner, they put it into the Veſſel with the Yeaſt on the Top and the Sediments at Bottom, taking particular Care to have ſome more in a Tub near the Cask to fill it up as it works over, and when it has done working, leave it with a thick Head of Yeaſt on to preſerve it.

But for Ale that is not to be kept very long,

they hop it accordingly, and beat the Yeaſt in every four or five Hours for two Days ſucceſſively in the warm Weather, and four in the Winter till the Yeaſt begins to work heavy and ſticks to the hollow part of the Bowl, if turn'd down on the ſame, then they take all the Yeaſt off at Top and leave all the Dregs behind, putting only up the clear Drink, and when it is a little work'd in the Barrel, it will be fine in a few Days and ready for drinking. But this laſt way of beating in the Yeaſt too long, I think I have ſufficiently detected, and hope, as it is now declining, it will never revive again, and for which reaſon I have in my Second Book encouraged all light fermentations, as the moſt natural for the Malt Liquor and the human Body.

Of forwarding and retarding the Fermentation of Malt Liquors.

In caſe Beer or Ale is backward in working, it is often practiſed to caſt ſome Flower out of the Duſting-box, or with the Hand over the Top of the Drink, which will become a ſort of Cruſt or Cover to help to keep the Cold out: Others will put in one or two Ounces of powder'd Ginger, which will ſo heat the Wort as to bring it forward: Others will take a Gallon Stone Bottle and fill it with boiling Water, which being well cork'd, is put into the working Tub, where it will communicate a gradual Heat for ſome time and forward the Fermentation: Others will reſerve ſome raw Wort, which they heat and mix with the reſt, but then due Care muſt be taken that the Pot in which it is heated has no manner of Greaſe about it, leaſt it impedes, inſtead of promoting the working, and for this reaſon ſome nice Brewers will not ſuffer a Candle too near the Wort, leaſt

it

it drop into it. But for retarding and keeping back any Drink that is too much heated in working, the cold raw Wort, as I have ſaid before, is the moſt proper of any thing to check it with, tho' I have known ſome to put one or more Pewter Diſhes into it for that Purpoſe, or it may be broke into ſeveral other Tubs, where by its ſhallow lying it will be taken off its Fury. Others again, to make Drink work that is backward, will take the Whites of two Eggs and beat them up with half a Quartern of good Brandy, and put it either into the working Vat, or into the Cask, and it will quickly bring it forward if a warm Cloth is put over the Bung. Others will tye up Bran in a coarſe thin Cloth and put it into the Vat, where by its ſpungy and flowery Nature and cloſe Bulk it will abſorb a quantity of the Drink, and breed a heat to forward its working.

I know an Inn-keeper of a great Town in *Bucks*, that is ſo curious as to take off all the Top Yeaſt firſt, and then by a Peg near the bottom of his working Tub, he draws off the Beer or Ale, ſo that the Dregs are by this means left behind. This I muſt own is very right in Ales that are to be drank ſoon, but in Beers that are to lye nine or twelve Months in a Butt or other Cask, there certainly will be wanted ſome Feces or Sediment for the Beer to feed on, elſe it muſt conſequently grow hungry, ſharp and eager; and therefore if its own top and bottom are not put into a Cask with the Beer, ſome other Artificial Compoſition or Lee ſhould ſupply its Place, that is wholeſomer, and will better feed with ſuch Drink than its own natural Settlement, and therefore I have here inſerted ſeveral curious Receipts for anſwering this great End.

CHAP.

CHAP. XIV.

Of an Artificial Lee for Stout or Stale Beer to feed on.

THIS Article, as it is of very great Importance in the curing of our Malt Liquors, requires a particular regard to this laſt Management of them, becauſe in my Opinion the general Miſfortune of the Butt or keeping Beers drinking ſo hard and harſh, is partly owing to the naſty foul Feces that lye at the bottom of the Cask, compounded of the Sediments of Malt, Hops and Yeaſt, that are all clogg'd with groſs rigid Salts, which by their long lying in the Butt or other Veſſel, ſo tinctures the Beer as to make it partake of all their raw Natures: For ſuch is the Feed, ſuch is the Body, as may be perceived by Eels taken out of dirty bottoms, that are ſure to have a muddy taſte, when the Silver Sort that are catched in Gravelly or Sandy clear Rivers eat ſweet and fine: Nor can this ill Property be a little in thoſe ſtarting (as they call it in *London*) new thick Beers that were carried directly from my Brewhouſe, and by a Leather Pipe or Spout conveyed into the Butt as they ſtood in the Cellar, which I ſhall further demonſtrate by the Example of whole Wheat, that is, by many put into ſuch Beer to feed and preſerve it, as being reckoned a ſubſtantial Alcali; however it has been proved that ſuch Wheat in about three Years time has eat into the very Wood of the Cask, and there Honey-com'd it by making little hollow Cavities in the Staves. Others there are that will hang a Bag of Wheat in the Veſſel

Veſſel that it mayn't touch the Bottom, but in both Caſes the Wheat is diſcoverd to abſorb and collect the ſaline acid qualities of the Beer, Yeaſt and Hop, by which it is impregnated with their ſharp Qualities, as a Toaſt of Bread is put into Punch or Beer, whoſe alcalious hollow Nature will attract and make a Lodgment of the acid ſtrong Particles in either, as is proved by eating the inebriating Toaſt, and therefore the *Frenchman* ſays, the *Engliſh* are right in putting a Toaſt into the Liquor, but are Fools for eating it: Hence it is that ſuch whole Wheat is loaded with the qualities of the unwholeſome Settlements or Grounds of the Beer, and becomes of ſuch a corroding Nature, as to do this Miſchief; and for that reaſon, ſome in the *North* will hang a Bag of the Flour of malted Oats, Wheat, Peaſe and Beans in the Veſſels of Beer, as being a lighter and mellower Body than whole Wheat or its Flower, and more natural to the Liquor: But whether it be raw Wheat or Malted, it is ſuppoſed, after this Receptacle has emitted its alcalious Properties to the Beer, and taken in all it can of the acid qualities thereof, that ſuch Beer will by length of Age prey upon that again, and ſo communicate its pernicious Effects to the Body of Man, as Experience ſeems to juſtify by the many ſad Examples that I have ſeen in the Deſtruction of ſeveral luſty Brewers Servants, who formerly ſcorn'd what they then called Flux Ale, to the preference of ſuch corroding conſuming ſtale Beers; and therefore I have hereafter adviſed that ſuch Butt or keeping Beers be Tapp'd at nine or twelve Months end at furtheſt, and then an Artificial Lee will have a due time allowed it to do good and not harm.

An Excellent Compoſition for feeding Butt or keeping Beers with.

Take a Quart of *French* Brandy, or as much of *Engliſh*, that is free from any burnt Tang, or other ill taſte, and is full Proof, to this put as much Wheat or Bean Flower as will knead it into a Dough, put it in long pieces into the Bung-hole, as ſoon as the Beer has done working, or afterwards, and let it gently fall piece by piece to the bottom of the Butt, this will maintain the Drink in a mellow freſhneſs, keep ſtaleneſs off for ſome time, and cauſe it to be the ſtronger as it grows Aged.

ANOTHER.

Take one Pound of Treacle or Honey, one Pound of the Powder of dryed Oyſter-ſhells or fat Chalk, mix them well, and put it into a Butt, as ſoon as it has done working or ſome time after, and bung it well, this will both fine and preſerve the Beer in a ſoft, ſmooth Condition for a great while.

ANOTHER.

Take a Peck of Egg-ſhells and dry them in an Oven, break and mix them with two Pound of fat Chalk, and mix them with Water wherein four Pounds of coarſe Sugar has been boiled, and put it into the But as aforeſaid.

To fine and preſerve Beers and Ales by boiling an Ingredient in the Wort.

This moſt valuable way I frequently follow both for Ale, Butt-beer and Small-beer, and that is,

is, in each Barrel Copper of Wort, I put in a Pottle, or two Quarts of whole Wheat as ſoon as I can, that it may ſoak before it boils, then I ſtrain it through a Sieve, when I put the Wort in cooling Tubs, and if it is thought fit the ſame Wheat may be boiled in a ſecond Copper: Thus there will be extracted a gluey Conſiſtence, which being incorporated with the Wort by boiling, gives it a more thick and ponderous Body, and when in the Cask, ſoon makes a Sediment or Lee, as the Wort is more or leſs loaded with the weighty Particles of this fizy Body; but if ſuch Wheat was firſt parched or baked in an Oven, it would do better, as being rather too raw as it comes from the Ear.

Another Way.

A Woman, who lived at *Leighton Buzzard* in *Bedfordſhire*, and had the beſt Ale in the Town, once told a Gentleman, ſhe had Drink juſt done working in the Barrel, and before it was bung'd would wager it was fine enough to drink out of a Glaſs, in which it ſhould maintain a little while a high Froth; and it was true, for the Ivory ſhavings that ſhe boiled in her Wort, was the Cauſe of it, which an Acquaintance of mine accidentally had a View of as they lay ſpread over the Wort in the Copper; ſo will Hartſhorn ſhavings do the ſame and better, both of them being great Finers and Preſervers of Malt-Liquors againſt ſtaleneſs and ſourneſs, and are certainly of a very alcalious Nature. Or if they are put into a Cask when you bung it down, it will be of ſervice for that Purpoſe, but theſe are dear in Compariſon of the whole Wheat, which will in a great meaſure ſupply their Place, and after it is uſed, may be given to a poor Body, or to the Hog.

To ſtop the Fret in Malt Liquors.

Take a Quart of Black Cherry Brandy, and pour it in at the Bung-hole of the Hogſhead and ſtop it cloſe.

To recover deadiſh Beer.

When ſtrong Drink grows flat, by the loſs of its Spirits, take four or five Gallons out of a Hogſhead, and boil it with five Pound of Honey, skim it, and when cold, put it to the reſt, and ſtop it up cloſe: This will make it pleaſant, quick and ſtrong.

To make ſtale Beer drink new.

Take the Herb *Horehound*, ſtamp it and ſtrain it, then put a Spoonful of the Juice (which is an extream good Pectoral) to a Pitcher full of Beer, let it ſtand covered about two Hours and drink it.

To fine Malt Liquors.

Take a Pint of Water, half an Ounce of unſlack'd Lime, mix them well together, let it ſtand three Hours and the Lime will ſettle to the bottom, and the Water be as clear as Glaſs, pour the Water from the Sediment, and put it into your Ale or Beer, mix it with half an Ounce of Iſing-glaſs firſt cut ſmall and boiled, and in five Hours time or leſs the Beer in the Barrel will ſettle and clear.

There are ſeveral other Compoſitions that may be uſed for this Purpoſe, but none that I ever heard of will anſwer like thoſe moſt excellent Balls that Mr. *Ellis* of *Little Gaddeſden* in *Hertfordſhire* has found out by his own Experience to be very great

great Refiners, Preſervers and Reliſhers of Malt Liquors and Cyders, and will alſo recover damag'd Drinks, as I have mention'd in my Second Book, where I have given a further Account of ſome other things that will fine, colour and improve Malt Drinks.

CHAP. XV.

Of ſeveral pernicious Ingredients put into Malt Liquors to encreaſe their Strength.

MALT Liquors, as well as ſeveral others, have long lain under the diſreputation of being adulterated and greatly abuſed by avaricious and ill principled People, to augment their Profits at the Expence of the precious Health of human Bodies, which, tho' the greateſt Jewel in Life, is ſaid to be too often loſt by the Deceit of the Brewer, and the Intemperance of the Drinker: This undoubtedly was one, and I believe the greateſt, of the Lord *Bacon*'s Reaſons for ſaying, he thought not one *Engliſhman* in a thouſand died a natural Death. Nor is it indeed to be much wonder'd at, when, according to Report, ſeveral of the Publicans make it their Buſineſs to ſtudy and practiſe this Art, witneſs what I am afraid is too true, that ſome have made uſe of the *Coculus India* Berry for making Drink heady, and ſaving the Expence of Malt; but as this is a violent Poiſon by its narcotick ſtupifying Quality, if taken in too large a degree, I hope this will be rather a prevention of its uſe than an Invitation, it being ſo much of the Nature of the deadly Nightſhade, that it bears the ſame Character; and I am ſure

the latter is bad enough; for one of my Neighbour's Brothers was killed by eating its Berries that grow in ſome of our Hedges, and ſo nearly reſembles the Black Cherry, that the Boy took the wrong for the right.

There is another ſiniſter Practice ſaid to be frequently uſed by ill Perſons to ſupply the full quantity of Malt, and that is *Coriander* Seeds: This alſo is of a heady Nature boiled in the Wort, one Pound of which will anſwer to a Buſhel of Malt, as was ingenuouſly confeſs'd to me by a Gardener, who ow'd he ſold a great deal of it to Alehouſe Brewers (for I don't ſuppoſe the great Brewer would be concern'd in any ſuch Affair) for that Purpoſe, at Ten-pence *per* Pound; but how wretchedly ignorant are thoſe that make uſe of it, not knowing the way firſt to cure and prepare it for this and other mixtures, without which it is a dangerous thing, and will cauſe Sickneſs in the Drinkers of it. Others are ſaid to make uſe of Lime-ſtones to fine and preſerve the Drink; but to come off the faireſt in ſuch foul Artifices, it has been too much a general Practice to beat the Yeaſt ſo long into the Ale, that without doubt it has done great Prejudice to the Healths of many others beſides the Perſon I have writ of in the Preface of my Second Book. For the ſake then of Seller and Buyer, I have here offered ſeveral valuable Receipts for fining, preſerving and mellowing Beers and Ales, in ſuch a true healthful and beneficial manner, that from henceforth after the Peruſal of this Book, and the Knowledge of their Worth are fully known, no Perſon, I hope, will be ſo ſordidly obſtinate as to have any thing to do with ſuch unwholeſome Ingredients; becauſe theſe are not only of the cheapeſt ſort, but will anſwer their End and Purpoſe; and the rather, ſince Malts are now only twenty Shillings *per* Quarter,

and

and like to hold a low Price for Reaſons that I could here aſſign.

I own, I formerly thought they were too valuable to expoſe to the Publick by reaſon of their Cheapneſs and great Virtues, as being moſt of them wholſomer than the Malt itſelf, which is but a corrupted Grain: But, as I hope they will do conſiderable Service in the World towards having clear ſalubrious and pleaſant Malt Liquors in moſt private Families and Alehouſes, I have my Satisfaction.

CHAP. XVI.

Of the Cellar or Repoſitory for keeping Beers and Ales.

IT's certain by long Experience, that the Weather or Air has not only a Power or Influence in Brewings; but alſo after the Drink is in the Barrel, Hogſhead or Butt, in Cellars or other Places, which is often the Cauſe of forwarding or retarding the fineing of Malt Liquors; for if we brew in cold Weather and the Drink is to ſtand in a Cellar of Clay, or where Springs riſe, or Waters lye or paſs through, ſuch a Place by conſequence will check the due working of the Drink, chill, flat, deaden and hinder it from becoming fine. So likewiſe if Beer or Ale is brewed in hot Weather, and put into Chalky, Gravelly or Sandy Cellars, and eſpecially if the Windows open to the South, South-Eaſt, or South-Weſt, then it is very likely it will not keep long, but be muddy and ſtale: Therefore, to keep Beer in ſuch a Cellar, it ſhould be brewed in *October*, that the Drink

Drink may have time to cure itſelf before the hot Weather comes on; but in wettiſh or damp Cellars, 'tis beſt to brew in *March*, that the Drink may have time to fine and ſettle before the Winter Weather is advanced. Now ſuch Cellar Extremities ſhould, if it could be done, be brought into a temperate State, for which Purpoſe ſome have been ſo curious as to have double or treble Doors to their Cellar to keep the Air out, and then careſully ſhut the outward, before they enter the inward one, whereby it will be more ſecure from aerial Alterations; for in Cellars and Places, that are moſt expoſed to ſuch Seaſons, Malt Liquors are frequently diſturb'd and made unfit for a nice Drinker; therefore if a Cellar is kept dry and theſe Doors to it, it is reckoned warm in Winter and cool in Summer, but the beſt of Cellars are thought to be thoſe in Chalks, Gravels or Sands, and particularly in Chalks, which are of a drying quality more than any other, and conſequently diſſipates Damps the moſt of all Earths, which makes it contribute much to the good keeping of the Drink; for all damp Cellars are prejudicial to the Preſervation of Beers and Ales, and ſooner bring on the rotting of the Casks and Hoops than the dry ones; inſomuch that in a chalky Cellar near me, their Aſhen broad Hoops have laſted above thirty Years: Beſides, in ſuch incloſed Cellars and temperate Air, the Beers and Ales ripen more kindly, are better digeſted and ſoftned, and drink ſmoother: But when the Air is in a diſproportion by the Cellars letting in Heats and Colds, the Drink will grow ſtale and be diſturbed, ſooner than when the Air is kept out: From hence it is, that in ſome Places their Malt Liquors are exceeding good, becauſe they brew with Pale or Amber Malts, Chalky Water, and keep their Drinks in cloſe Vaults or proper dry Cellars, which is of

ſuch

ſuch Importance, that notwithſtanding any Malt Liquor may be truly brewed, yet it may be ſpoiled in a bad Cellar that may cauſe ſuch alternate Fermentations as to make it thick and ſour, tho' it ſometimes happens that after ſuch Changes it fines itſelf again; and to prevent theſe Commotions of the Beer, ſome brew their pale Malt in *March* and their brown in *October*, for that the pale Malt, having not ſo many fiery Particles in it as the Brown, ſtands more in need of the Summer's Weather to ripen it, while the brown ſort being more hard and dry is better able to defend itſelf againſt the Winter Colds that will help to ſmooth its harſh Particles; yet when they happen to be too violent, Horſe-dung ſhould be laid to the Windows as a Fortification againſt them; but if there were no Lights at all to a Cellar, it would be better.

Some are of Opinion, that *October* is the beſt of all other Months to brew any ſort of Malt in, by reaſon ſo many cold Months directly follow, that will digeſt the Drink and make it much excel that brewed in *March*, becauſe ſuch Beer will not want that Care and Watching, as that brewed in *March* abſolutely requires, by often taking out and putting in the Vent-peg on Change of Weather; and if it is always left out, then it deadens and palls the Drink; yet if due Care is not taken in this reſpect, a Thunder or ſtormy Night may mar all, by making the Drink ferment and burſt the Cask; for which Reaſon, as Iron Hoops are moſt in Faſhion at this time, they are certainly the greateſt Security to the Safety of the Drink thus expoſed; and next to them is the Cheſnut Hoop; both which will endure a ſhorter or longer time as the Cellar is more or leſs dry, and the Management attending them: The Iron Hoop generally begins to ruſt firſt at the Edges, and therefore ſhould be

be rubbed off when opportunity offers, and be both kept from Wet as much as poſſible; for 'tis Ruſt that eats the Iron Hoop in two ſometimes in ten or twelve Years, when the Aſhen and Cheſnut in dry Cellars have laſted three times as long.

CHAP. XVII.

Of Cleaning and Sweetning of Casks.

IN Caſe your Cask is a Butt, then with cold Water firſt wrince out the Lees clean, and have ready, boiling or very hot Water, which put in, and with a long Stale and little Birch faſtened to its End, ſcrub the Bottom as well as you can: At the ſame time let there be provided another ſhorter Broom of about a Foot and a half long, that with one Hand may be ſo employed in the upper and other Parts as to clean the Cask well: So in a Hogſhead or other ſmaller Veſſel, the one-handed ſhort Broom may be uſed with Water, or with Water, Sand or Aſhes, and be effectually cleaned; the outſide of the Cask about the Bung-hole ſhould be well waſhed, leaſt the Yeaſt, as it works over, carries ſome of its Filth with it.

But to ſweeten a Barrel, Kilderkin, Firkin or Pin in the great Brewhouſes, they put them over the Copper-hole for a Night together, that the ſteam of the boiling Water or Wort may penetrate into the Wood; this Way is ſuch a furious Searcher, that unleſs the Cask is new hooped juſt before, it will be apt to fall in pieces.

Another

Another Way.

Take a Pottle, or more, of Stone-Lime, and put it into the Cask; on this pour ſome Water and ſtop it up directly, ſhaking it well about.

Another Way.

Take a long Linnen Rag and dip it in melted Brimſtone, light it at the End, and let it hang pendant with the upper part of the Rag faſtened to the wooden Bung; this is a moſt quick ſure Way, and will not only ſweeten, but help to fine the Drink.

ANOTHER.

Or to make your Cask more pleaſant, you may uſe the Vintners Way thus: Take four Ounces of Stone Brimſtone, one Ounce of burnt Alum, and two Ounces of Brandy; melt all theſe in an Earther Pan over hot Coals, and dip therein a piece of new Canvas, and inſtantly ſprinkle thereon the Powders of Nutmegs, Cloves, Coriander and Aniſe-Seeds: This Canvas ſet on fire, and let it burn hanging in the Cask faſtened at the End with the wooden Bung, ſo that no Smoak comes out.

For a Muſty Cask.

Boil ſome Pepper in Water and fill the Cask with it ſcalding hot.

For a very ſtinking Veſſel.

The laſt Remedy is the Coopers taking out one of the Heads of the Cask to ſcrape the Inſide, or

new-ſhave the Staves, and is the ſureſt way of all others, if it is fired afterwards within-ſide a ſmall matter, as the Cooper knows how.

Theſe ſeveral Methods may be made uſe of at Diſcretion, and will be of great Service where they are wanted. The ſooner alſo a Remedy is applied, the better; elſe the Taint commonly encreaſes, as many have to their Prejudice proved, who have made uſe of ſuch Casks, in hopes the next Beer will overcome it; but when once a Cask is infected, it will be a long while, if ever, before it becomes ſweet, if no Art is uſed. Many therefore of the careful ſort, in caſe they han't a Convenience to fill their Veſſel as ſoon as it is empty, will ſtop it cloſe, to prevent the Air and preſerve the Lees ſound, which will greatly tend to the keeping of the Cask pure and ſweet againſt the next Occaſion.

To prepare a new Veſſel to keep Malt Liquors in.

A new Veſſel is moſt improperly uſed by ſome ignorant People for ſtrong Drink after only once or twice ſcalding with Water, which is ſo wrong, that ſuch Beer or Ale will not fail of taſting thereof for half, if not a whole Year afterwards; ſuch is the Tang of the Oak and its Bark, as may be obſerved from the ſtrong Scents of Tan-Yards, which the Bark is one Cauſe of. To prevent then this Inconvenience, when your Brewing is over put up ſome Water ſcalding hot and let it run thro' the Grains, then boil it and fill up the Cask, ſtop it well and let it ſtand till it is cold, do this twice, then take the Grounds of ſtrong Drink and boil in it green Wallnut Leaves and new Hay or Wheat Straw, and put all into the Cask, that it be full and ſtop it cloſe: After this, uſe it for Small-beer half a Year together, and then it will be

be thoroughly ſweet and fit for ſtrong Drinks; or

Another Way.

Take a new Cask and dig a Hole in the Ground, in which it may lye half depth with the Bung downwards; let it remain a Week, and it will greatly help this or any ſtinking muſty Cask. But beſides theſe, I have writ of two other excellent Ways to ſweeten muſty or ſtinking Casks, in my Second Book of Brewing.

Wine Casks.

Theſe, in my Opinion, are the cheapeſt of all others to furniſh a Perſon readily with, as being many of them good Caks for Malt Liquors, becauſe the Sack and White-Wine Sorts are already ſeaſon'd to Hand, and will greatly improve Beers and Ales that are put in them: But beware of the Rheniſh Wine Cask for ſtrong Drinks; for its Wood is ſo tinctured with this ſharp Wine, that it will hardly ever be free of it, and therefore ſuch Cask is beſt uſed for Small-beer: The Claret Cask will a great deal ſooner be brought into a ſerviceable State for holding ſtrong Drink, if it is two or three times ſcalded with Grounds of Barrels, and afterwards uſed for Small-beer for ſome time. I have bought a Butt or Pipe for eight Shillings in *London* with ſome Iron Hoops on it, a good Hogſhead for the ſame, and the half Hogſhead for five Shillings, the Carriage for a Butt by the Waggon thirty Miles is two Shillings and Six-pence, and the Hogſhead eighteen pence: But to cure a Claret Cask of its Colour and Taſte, put a Peck of Stone-Lime into a Hogſhead, and pour upon it three Pails of Water; bung immediately

with a Wood or Cork Bung, and ſhake it well about a quarter of an Hour, and let it ſtand a Day and Night, and it will bring off the red Colour, and alter the Taſte of the Cask very much. But of three ſeveral other excellent Methods for curing muſty, ſtinking, new and other tainted Casks, I have writ of in my Account of Casks in my Second Book.

CHAP. XVIII.

Of Bunging Casks and Carrying of Malt Liquors to ſome Diſtance.

I AM ſure this is of no ſmall Conſequence, however it may be eſteemed as a light matter by ſome; for if this is not duly performed, all our Charge, Labour and Care will be loſt; and therefore here I ſhall diſſent from my *London* Faſhion, where I bung'd up my Ale with Pots of Clay only, or with Clay mixt with Bay Salt, which is the better of the two, becauſe this Salt will keep the Clay moiſt longer than in its Original State; and the Butt Beers and fine Ales were bung'd with Cork drove in with a piece of Hop-Sack or Rag, which I think are all inſipid, and the occaſion of ſpoiling great Quantities of Drink, eſpecially the Small Beers; for when the Clay is dry, which is ſoon in Summer, there cannot be a regular Vent thro' it, and then the Drink from that time flattens and ſtales to a great loſs in a Year to ſome Owners, and the Benefit of the Brewer; for then a freſh Cask muſt be tapp'd to ſupply it, and the remaining part of the other thrown away. Now, to prevent

vent this great Inconvenience, my Bung-holes are not quite of the largeſt ſize of all, and yet big enough for the common wooden Iron-hoop'd Funnel uſed in ſome Brew-houſes: In this I put in a turned piece of Aſh or Sallow three Inches broad at Top, and two Inches and a half long, firſt putting in a double piece of dry brown Paper, that is ſo broad that an Inch or more may be out of it, after the wooden Bung is drove down with a Hammer pretty tight; this Paper muſt be furl'd or twiſted round the Bung, and another looſe piece upon and around that, with a little Yeaſt, and a ſmall Peg put into the Bung, which is to be raiſed at Diſcretion when the Beer is drawing, or at other times to give it Vent if there ſhould be occaſion: Others will put ſome Coal or Wood Aſhes wetted round this Bung, which will bind very hard, and prevent any Air getting into or out of the Cask; but this in time is apt to rot, and wear the Bung-hole by the Salt or Sulphur in the Aſhes, and employing a Knife to ſcrape it afterwards. Yet, for keeping Beers, its the beſt Security of all other ways whatſoever.

There is alſo a late Invention practiſed by a common Brewer in the Country that I am acquainted with, for the ſafe Carriage of Drink on Drays, to ſome Diſtance without loſing any of it, and that is in the Top Center of one of theſe Bungs, he puts in a wooden Funnel, whoſe Spout is about four Inches long, and leſs than half an Inch Diameter at Bottom; this is turned at Top into a concave Faſhion like a hollow round Bowl, that will hold about a Pint, which is a conſtant Vent to the Cask, and yet hinders the Liquor from aſcending faſter than the Bowl can receive, and returns it again into the Barrel: I may ſay further, he has brought a Barrel two Miles, and it was then full, when it arrived at his Cuſtomers, be-

cauſe

becauſe the Pint that was put into the Funnel, at ſetting out, was not at all loſt when he took it off the Dray; this may be alſo made of Tin, and will ſerve from the Butt to the ſmall Cask.

In the Butt there is a Cork-hole made about two Inches below the upper Head, and cloſe under that a piece of Leather is nailed Spout-faſhion, that jets three Inches out, from which the Yeaſt works and falls into a Tub, and when the working is over the Cork is put cloſely in, for the Bung in the Head of the upright Cask is put in as ſoon as it is filled up with new Drink: Now when ſuch a Cask is to be broach'd and a quick Draught is to follow, then it may be tapp'd at Bottom; but if otherwiſe, the Braſs Cock ought to be firſt put in at the middle, and before the Drink ſinks to that it ſhould be tapp'd at Bottom to prevent the breaking of the Head of Yeaſt, and its growing ſtale, flat and ſour.

In ſome Places in the Country when they brew Ale or Beer to ſend to *London* at a great Diſtance, they let it be a Year old before they Tap it, ſo that then it is perfectly fine; this they put into ſmall Casks that have a Bung-hole only fit for a large Cork, and then they immediately put in a Role of Bean-Flour firſt kneaded with Water or Drink, and baked in an Oven, which is all ſecured by pitching in the Cork, and ſo ſent in the Waggon; the Bean-Flour feeding and preſerving the Body of the Drink all the way, without fretting or cauſing it to burſt the Cask for want of Vent, and when tapp'd will alſo make the Drink very brisk, becauſe the Flour is in ſuch a hard Conſiſtence, that it won't diſſolve in that time; but if a little does mix with the Ale or Beer, its heavy Parts will ſooner fine than thicken the Drink and keep it mellow and lively to the laſt, if Air is kept out of the Barrel.

CHAP.

CHAP. XIX.

Of the Strength and Age of Malt Liquors.

WHether they be Ales or ſtrong Beers, it is certain that the midling ſort is allowed by Phyſicians to be the moſt agreeable of any, eſpeally to thoſe of a ſedentary Life, or thoſe that are not occupied in ſuch Buſineſs as promotes Perſpiration enough to throw out and break the Viſcidities of the ſtronger ſorts; on which account the laborious Man has the advantage, whoſe Diet being poor and Body robuſt, the Strength of ſuch Liquors gives a Supply and better digeſts into Nouriſhment: But for the unactive Man a Hogſhead of Ale which is made from ſix Buſhels of Malt is ſufficient for a Diluter of his Food, and will better aſſiſt his Conſtitution than the more ſtrong ſort, that would in ſuch produce Obſtructions and ill Humours; and therefore that Quantity for Ale, and ten Buſhels for a Hogſhead of ſtrong Beer that ſhould not be Tapp'd under nine Months, is the moſt healthful. And this I have experienc'd by enjoying ſuch an Amber Liquor that has been truly brewed from good Malt, as to be of a Vinous Nature, that would allow of a hearty Doſe over Night, and yet the next Morning leave a Perſon light, briſk and unconcern'd. This then is the true Noſtrum of Brewing, and ought to be ſtudied and endeavoured for by all thoſe that can afford to follow the foregoing Rules, and then it will ſupply in a great meaſure thoſe chargeable (and often adulterated tartarous arthritick) Wines. So likewiſe for Small Beer, eſpecially in a Farmer's Fa-

Family where it is not of a Body enough, the Drinkers will be feeble in hot Weather, and not be able to perform their Work, and will alſo bring on Diſtempers, beſides the Loſs of time, and a great Waſte of ſuch Beer that is generally much thrown away; becauſe Drink is certainly a Nouriſher of the Body, as well as Meats, and the more ſubſtantial they both are, the better will the Labourer go through his Work, eſpecially at Harveſt; and in large Families the Doctor's Bills have proved the Evil of this bad Oeconomy, and far ſurmounted the Charge of that Malt that would have kept the Servants in good Health, and preſerved the Beer from ſuch Waſte as the ſmaller ſort is liable to.

'Tis therefore that ſome prudent Farmers will brew their Ale and Small Beer in *March*, by allowing of five or ſix Buſhels of Malt, and two Pounds of Hops to the Hogſhead of Ale, and a quarter of Malt and three Pounds of Hops to five Barrels of Small Beer. Others there are that will brew their Ale or ſtrong Beer in *October*, and their ſmall Beer a Month before it is wanted. Others will brew their Ale and ſmall Beer in *April*, *May* and *June*; but this according to humour, and therefore I have hinted the ſeveral Seaſons for brewing theſe Liquors: However in my Opinion, whether it be ſtrong or ſmall Drinks, they ſhould be clear, ſmooth and not too ſmall, if they are deſign'd for Profit and Health; for if they are otherwiſe, it will be a ſad Evil to Harveſt Men, becauſe then they ſtand moſt in need of the greateſt Balſamicks: To this end ſome of the ſoftning Ingredients mentioned in the foregoing Receipts ſhould be made uſe of to feed it accordingly, if theſe Drinks are brewed forward. And that this particular important Article in the brewing Oeconomy may be better underſtood, I ſhall here recite

cite Dr. *Quincy*'s Opinon of Malt Liquors, *viz.* " The Age of Malt Drinks makes them more or " leſs wholeſome, and ſeems to do ſomewhat the " ſame as Hops; for thoſe Liquors which are " longeſt kept, are certainly the leaſt viſcid; Age " by degrees breaking the viſcid Parts, and render- " ing them ſmaller, makes them finer for Secretion; " but this is always to be determined by their " Strength, becauſe in Proportion to that, will " they ſooner or later come to their full Perfection " and likewiſe their Decay, until the finer Spirits " quite make their Eſcape, and the remainder " becomes vapid and ſour." By what therefore has been already ſaid, it will appear that the older Drinks are the more healthful, ſo they be kept up to this Standard, but not beyond it. Some therefore are of Opinion, that ſtrong Beer brewed in *October* ſhould be Tapp'd at *Midſummer*, and that brewed in *March* at *Chriſtmas*, as being moſt agreeable to the Seaſons of the Year that follow ſuch brewings: For then they will both have part of a Summer and Winter to ripen and digeſt their ſeveral Bodies; and 'tis my humble Opinion, that where the Strength of the Beer, the Quantity of Hops, the boiling, Fermentation and the Cask are all rightly manag'd, there Drink may be moſt excellent, and better at nine Months Age, than at nine Years, for Health and Pleaſure of Body. But to be truly certain of the right Time, there ſhould be firſt an Examination made by Peging the Veſſel to prove if ſuch Drink is fine, the Hop ſufficiently rotted, and it be mellow and well taſted.

CHAP. XX.

Of the Pleaſure and Profit of Private Brewing, and the Charge of buying Malt Liquors.

HERE I am to treat of the main Article of ſhewing the Difference between brewing our own Ales and Beers, and buying them, which I doubt not will appear ſo plain and evident, as to convince any Reader, that many Perſons may ſave well towards half in half, and have their Beer and Ale ſtrong, fine and aged at their own Diſcretion: A Satisfaction that is of no ſmall weight, and the rather ſince I have now made known a Method of brewing a Quantity of Malt with a little Copper and a few Tubs, a Secret that has long wanted Publication; for now a Perſon may brew in a little Room, and that very ſafely by keeping his Wort from Foxing, as I have already explained, which by many has been thought impoſſible heretofore; and this Direction is the more valuable as there are many Thouſands who live in Cities and Towns, that have no more than a few Yards ſquare of Room to perform a private Brewing in. And as for the Trouble, it is eaſy to account for by thoſe who have time enough on their Hands, and would do nothing elſe if they had not done this: Or if a Man is paid half a Crown a Day for a Quantity accordingly: Or if a Servant can do this beſides his other Work for the ſame Wages and Charge, I believe the following Account will make it appear it is over-ballanced conſiderably, by what ſuch a Perſon *may* ſave in this Undertaking,

ing, beſides the Pleaſure of thoroughly knowing the ſeveral Ingredients and Cleanlineſs of the Brewer and Utenſils. In ſeveral of the Northern Counties of *England*, where they have good Barley, Coak-dryed Malt, and the Drink brewed at Home, there are ſeldom any bad Ales or Beers, becauſe they have the Knowledge in Brewing ſo well, that there are hardly any common Brewers amongſt them: In the Weſt indeed there are ſome few, but in the South and Eaſt Parts there are many; and now follows the Account, that I have ſtated according to my own general Practice, *viz.*

A Calculation of the Charge and Profit of Brewing ſix Buſhels of Malt for a Private Family.

	l.	*s.*	*d.*
Six Buſhels of Malt at 2 *s.* 8 *d. per* Buſhel, Barley being this Year 1733. ſold for 14 *s. per* Quarter by the Farmer	0	16	0
Hops one Pound	0	1	6
Yeaſt a Quart	0	0	4
Coals one Buſhel, or if Wood or Furze	0	1	0
A Man's Wages a Day	0	2	6
Total	1	1	4

Of theſe ſix Buſhels of Malt I make one Hogſhead of Ale and another of Small Beer: But if I was to buy them of ſome common Brewers, the Charge will be as follows, viz.

	l.	*s.*	*d.*
One Hogſhead of Ale containing 48 Gallons, at 6 *d. per* Gallon is	1	4	0
One Hogſhead of Small Beer containing 54 Gallons, at 2 *d. per* Gallon is	0	9	0
	1	13	0
Total Saved	0	11	8

By the above Account it plainly appears, that 11 *s* and 8 *d.* is clearly gained in brewing of ſix Buſhels of Malt at our own Houſe for a Private Family, and yet I make the Charge fuller by 2 *s.* and 6 *d.* than it will happen with many, whoſe Conveniency by Servants, *&c.* may intirely take it off; beſides the ſix Buſhels of Grains that are currently ſold for Three-pence the Buſhel, which will make the Eleven and Eight-pence more by Four Shillings, without reckoning any thing for Yeaſt, that in the very cheapeſt time ſells here for Four-pence the Quart, and many times there happens three Quarts from ſo much Drink; ſo that there may poſſibly be gained in all Sixteen Shillings and Eight-pence: A fine Sum indeed in ſo ſmall a Quantity of Malt. But here by courſe will ariſe a Queſtion, whether this Ale is as good as that bought of ſome of the common Brewers at Six-pence a Gallon; I can't ſay all is; however I can aver this, that the Ale I brew in the Country from ſix Buſhels of Malt for my Family, I think

think is generally full as good, if not better than any I ever ſold at that Price in my *London* Brew-houſe: And if I ſhould ſay, that where the Malt, Water and Hops are right good, and the Brewer's Skill anſwerable to them, there might be a Hogſhead of as good Ale and another of Small-beer made from five Buſhels as I deſire to uſe for my Family, or for Harveſt Men; It is no more than I have many times experienc'd, and 'tis the common length I made for that Purpoſe. And whoever makes uſe of true Pale and Amber Malts, and purſues the Directions of this Book, I doubt not but will have their Expectation fully anſwered in this laſt Quantity, and ſo ſave the great Expence of Exciſe that the common Brewers Drink is always clogg'd with, which is no leſs than five Shillings for Ale and Eighteen-pence *per* Barrel for Small-beer.

CHAP. XXI.

A Philoſophical Account for Brewing Strong October *Beer. By an Ingenious Hand.*

IN Brewing, your Malt ought to be ſound and good, and after its making to lye two or more Months in the Heap, to come to ſuch a temper, that the Kernel may readily melt in the maſhing.

The well dreſſing your Malt, ought to be one chief Care; for unleſs it be freed from the Tails and Duſt, your Drink will not be fine and mellow as when it is clean dreſſed.

The grinding alſo muſt be conſidered according to the high or low drying of the Malt; for if high dried, then a groſs grinding is beſt, otherwiſe

wiſe a ſmaller may be done; for the Care in grinding conſiſts herein, leſt too much of the Husk being ground ſmall ſhould mix with the Liquor, which makes a groſs Feces, and conſequently your Drink will have too fierce a Fermentation, and by that means make it Acid, or that we call Stale.

When your Malt is ground, let it ſtand in Sacks twenty-four Hours at leaſt, to the end that the Heat in grinding may be allayed, and 'tis conceived by its ſo ſtanding that the Kernel will diſſolve the better.

The Meaſure and Quantity we allow of Hops and Malt, is five Quarter of Malt to three Hogſheads of Beer, and eighteen Pounds of Hops at leaſt to that Quantity of Malt, and if Malt be pale dried, then add three or four Pounds of Hops more.

The choice of Liquor for brewing is of conſiderable Advantage in making good Drink, the ſofteſt and cleaneſt Water is to be preferr'd, your harſh Water is not to be made uſe of.

You are to boil your firſt Liquor, adding a Handful or two of Hops to it, then before you ſtrike it over to your Goods or Malt, cool in as much Liquor, as will bring it to a temper not to ſcald the Malt, for it is a Fault not to take the Liquor as high as poſſible, but not to ſcald.

The next Liquors do the ſame.

And indeed all your Liquors ought to be taken as high as may be, that is not to ſcald.

When you let your Wort from your Malt into the Under-back, put to it a Handful or two of Hops, 'twill preſerve it from that Accident which Brewers call Blinking or Foxing.

In boiling your Worts, the firſt Wort boil high or quick; for the quicker the firſt Wort is boiled, the better it is.

The

The ſecond boil more than the firſt, and the tird or laſt more than the ſecond.

In cooling lay your Worts thin, and let each be well cooled, and Care muſt be taken in letting them down into the Tun, that you do it leiſurely, to the end that as little of the Feces or Sediment may paſs, which cauſes the Fermentation to be fierce or mild, for

Note, there is in all fermented Liquors, Salt and Sulphur, and to keep theſe two Bodies in a due Proportion, that the Salt does not exalt it ſelf above the Sulphur, conſiſts a great part of the Art of Brewing.

When your Wort is firſt let into your Tun, put but a little Yeaſt to it, and let it work by degrees quietly, and if you find it works but moderate, whip in the Yeaſt two or three times or more, till you find your Drink well fermented, for without a full opening of the Body by Fermentation, it will not be perfect fine, nor will it drink clean and light.

When you cleanſe, do it by a Cock from your Tun, placed ſix Inches from the Bottom, to the end that moſt of the Sediment may be left behind, which may be thrown on your Malt to mend your Small-beer.

When your Drink is Tunn'd, fill your Veſſel full, let it work at the Bung-hole, and have a Reſerve in a ſmall Cask to fill it up, and don't put any of the Drink which will be under the Yeaſt after it is work'd over into your Veſſels, but put it by it ſelf in another Cask, for it will not be ſo good as your other in the Cask.

This done, you muſt wait for the finiſhing of the Fermentation, then ſtop it cloſe, and let it ſtand till the Spring, for brewing ought to be done in the Month of *October*, that it may have time to ſettle and digeſt all the Winter Seaſon.

In

In the Spring you muſt unſtop your Vent-hole and thereby ſee whether your Drink doth ferment or not, for as ſoon as the warm Weather comes, your Drink will have another Fermentation, which when it is over, let it be again well ſtopped and ſtand till *September* or longer, and then peg it; and if you find it pretty fine, the Hop well rotted and of a good pleaſant taſte for drinking,

Then and not before draw out a Gallon of it, put to it two Ounces of Iſing-glaſs cut ſmall and well beaten to melt, ſtirring it often and whip it with a Wisk till the Iſing-glaſs be melted, then ſtrain it and put it into your Veſſel, ſtirring it well together, ſtop the Bung ſlightly, for this will cauſe new and ſmall Fermentation, when that is over op it cloſe, leaving only a Vent-hole a little opp'd, let it ſtand, and in ten Days or a little ore, it will be tranſparently fine, and you may ink of it out of the Veſſel till two Parts in three drawn, then bottle the reſt, which will in a litt time come to drink very well.

If your Drink in *September* be well condition'd Taſte, but not fine, and you deſire to drink preſently, rack it before you put your *Iſing-glaſs* it, and then it will fine the better and drink e cleaner.

To make Drink fine quickly, I have been told that it may be done by ſeparating the Liquor from the Feces, when the Wort is let out of the Tun in the Under-back, in this manner, when you let your Wort into your Under-back out of your Tun, catch the Wort in ſome Tub ſo long, and ſo often as you find it run foul, put that ſo catched on the Malt again, and do ſo till the Wort run clear into the Under-back. This is to me a very good way (where it may be done) for 'tis the Feces which cauſes the fierce and violent Fermentation, and to hinder that in ſome meaſure is the

the way to have fine Drink: Note that the finer you make your Wort, the ſooner your Drink will be fine, for I have heard that ſome Curious in Brewing, have cauſed Flannels to be ſo placed, that all the Wort may run thro' one or more of them into the Tun before working, by which means the Drink was made very fine and well taſted.

Obſervations on the foregoing Account.

This Excellent Philoſophical Account of brewing *October Beer*, has hitherto remained in private Hands as a very great Secret, and was given to a Friend of mine by the Author himſelf, to whom the World is much obliged, altho' it comes by me; In Juſtice therefore to this Ingenious Perſon, I would here mention his Name, had I leave for ſo doing; but at preſent this Intimation muſt ſuffice. However, I ſhall here take notice, that his Caution againſt uſing tailed or duſty Malt, which is too commonly ſold, is truly worthy of Obſervation; for theſe are ſo far from producing more Ale or Beer, that they abſorb and drink part of it up.

In grinding Malts he gives good Advice to prevent foul Drink.

The Quantity he allows is ſomething above thirteen Buſhels to the Hogſhead which is very ſufficient; but this as every body pleaſes.

The Choice of Liquors or Waters for brewing, he ſays, is of conſiderable Advantage; and ſo muſt every body elſe that knows their Natures and loves Health, and pleaſant Drink: For this purpoſe, in my Opinion, the Air and Soil is to be regarded where the brewing is performed; ſince the Air affects all things it can come at, whether Animal, Vegetable or Mineral, as may be proved

from many Inſtances: In the Marſhes of *Kent* and *Eſſex*, the Air there is generally ſo infectious by means of thoſe low vaeſy boggy Grounds, that ſeldom a Perſon eſcapes an Ague one time or other, whether Native or Alien, as is often fatally known to ſome of the *Londoners* and others who merrily and nimbly travel down to the Iſles of *Grain* and *Sheppy* for a valuable Harveſt, but in a Month's time they generally return thro' the Village of *Shorne* with another Mien. There is alſo a little *Moor* in *Hertfordſhire*, thro' which a Water runs that frequently gives the paſſant Horſes that drink of it, the Cholick or Gripes, by means of the aluminous ſharp Particles of its Earth; its Air is alſo ſo bad, as has obliged ſeveral to remove from its Situation for their Healths: The Dominion of the Air is likewiſe ſo powerful over Vegetables, that what will grow in one Place won't in another, as is plain from the Beech and Black Cherry Tree, that refuſe the Vale of *Ailesbury* tho' on ſome Hills there, yet will thrive in the *Chiltern* or Hilly Country: So the Limes and other Trees about *London* are all generally black-barked, while thoſe in the Country are moſt of them of a Silver white. Water is alſo ſo far under the Influence of the Air and Soil, that ſome of them are excellent for brewing when others are as bad. In Rivers, that run thro' boggy Places, the Sullage or Waſhings of ſuch Soils are generally unwholeſome as the nature of ſuch Ground is; and ſo the Water becomes infected by that and the Effluvia or Vapour that accompanies ſuch Water: So Ponds are ſurely good or bad, as they are under too much Cover or ſupply'd by naſty Drains, or as they ſtand ſituated or expoſed to good and bad Airs. Thus the Well-Waters by conſequence ſhare in the good or bad Effects of the Soils they run thorough, and the very Surface of the Earth by

by which ſuch Waters are ſtrained, is ſurely endowed with the Quality of the Air in which it lies; which brings me to my intended Purpoſe, to prove that Water drawn out of a Chalky or Fire-ſtone Well, which is ſituated under a dry ſweet loamy Soil, in a fine pure Air, that is perfectly ſoft, muſt excel moſt if not all other Well-Waters for the purpoſe in brewing. The Worts alſo that are cooled in ſuch an Air, in courſe partake of its nitrous Benefits, as being much expoſed thereto in the high Backs or Coolers that contain them. In my own Grounds I have Chalks under Clays and Loams; but as the latter is better than the former, ſo the Water proves more ſoft and wholeſome under one than the other: Hence then may be obſerved the contrary Quality of thoſe harſh curdling Well-Waters, that many drink of in their Malt Liquors, without conſidering their ill Effects, which are juſtly condemn'd by this able Author as unfit to be made uſe of in brewing *October* Beer.

The boiling a few Hops in the firſt Water is good, but they muſt be ſtrained thro' a Sieve before the Water is put into the Malt; and to check its Heat with cold Liquor, or to let it ſtand to cool ſome time, is a right Method, leaſt it ſcalds and locks up the Pores of the Malt, which would then yield a thick Wort to the end of the brewing and never be good Drink.

His putting Hops into the Under-back, is an excellent Contrivance to prevent foxing, as I have already hinted.

The quick boiling of the Wort is of no leſs Service, and that the ſmaller Wort ſhould be boiled longer than the ſtrong is good Judgment, becauſe the ſtronger the Wort, the ſooner the Spirits fly away and the Waſte of more Conſequence; beſides if the firſt Wort was to be boiled too long,

it would obtain ſo thick a Body, as to prevent in great meaſure its fining hereafter ſo ſoon in the Barrel; while the ſmaller ſort will evaporate its more watry parts, and thereby be brought into a thicker Conſiſtence, which is perfectly neceſſary in thin Worts; and in this Article lies ſo much the Skill of the Brewer, that ſome will make a longer Length than ordinary from the Goods for Small-beer, to ſhorten it afterwards in the Copper by Length of boiling, and this way of conſuming it is the more natural, becauſe the remaing part will be better cured.

The laying Worts thin is a moſt neceſſary Precaution; for this is one way to prevent their running into Coheſions and Foxing, the want of which Knowledge and Care has undoubtedly been the occaſion of great Loſſes in brewing; for when Worts are tainted in any conſiderable degree, they will be ropy in time and unfit for the human Body, as being unwholeſome as well as unpleaſant. So likewiſe is his *Item* of great Importance, when he adviſes to draw the Worts off fine out of the Backs or Coolers, and leave the Feces or Sediments behind, by reaſon, as he ſays, they are the cauſe of thoſe two deteſted Qualities in Malt Liquors, Staleneſs and Foulneſs, two Properties that ought to employ the greateſt Care in Brewers to prevent; for 'tis certain theſe Sediments are a Compoſition of the very worſt part of the Malt, Hops and Yeaſt, and while they are in the Barrel, will ſo taint and impregnate the Drink with their unwholſome and unpleaſant nature, that its Drinkers will be ſure to participate thereof more or leſs as they have lain together a longer or a ſhorter time. To have then a Malt Drink balſamick and mild, the Worts cannot be run off too fine from the Coolers, nor well fermented too ſlow, that there may be a Medium kept, in both the

Salt

Salt and Sulphur that all fermented Malt Drinks abound with, and herein, as he ſays, lies a great part of the Art of Brewing.

He ſays truly well, that a little Yeaſt at firſt ſhould be put to the Wort, that it may quietly work by degrees, and not be violently forc'd into a high Fermentation; for then by courſe the Salt and Sulphur will be too violently agitated in ſuch an Exceſs and Diſagreement of Parts, that will break their Unity into irregular Commotions, and cauſe the Drink to be ſoon ſtale and harſh. But if it ſhould be too backward and work too moderate, then whipping the Yeaſt two or three times into it will be of ſome ſervice to open the Body of the Beer, for as he obſerves, if Drink has not a due fermentation, it will not be fine, clean, nor light.

His advice to draw the Drink out of the Tun by a Cock at ſuch a diſtance from the bottom is right: becauſe that room will beſt keep the Feces from being diſturb'd as the Drink is drawing off, and leave them behind; but for putting them afterwards over the Malt for Small-beer, I don't hold it conſonant with good brewing, by reaſon in this Sediment there are many Particles of the Yeaſt, that conſequently will cauſe a ſmall fermentation in the Liquor and Malt, and be a means to ſpoil rather than make good Small-beer.

What he ſays of filling up the Cask with a reſerve of the ſame Drink, and not with that which has once worked out, is paſt diſpute juſt and right.

And ſo is what he ſays of ſtopping up the Veſſel cloſe after the Fermentation is over; but that it is beſt to brew all ſtrong Beer in *October*, I muſt here take leave to diſſent from the Tenet, becauſe there is room for ſeveral Objections in relation to the ſort of Malt and Cellar, which as I have before explained, ſhall ſay the leſs here.

As

As he obſerves Care ſhould be taken in the Spring to unſtop the Vent, leaſt the warm Weather cauſe ſuch Fermentation as may burſt the Cask, and alſo in *September*, that it be firſt try'd by Pegging if the Drink is fine, well taſted and the Hop rotted; and then if his Way is liked beſt, bring the reſt into a tranſparent Fineneſs; for Clearneſs in Malt Liquors, as I ſaid before, and here repeat it again, is a moſt agreeable Quality that every Man ought to enjoy for his Health and Pleaſure, and therefore he adviſes for diſpatch in this Affair, and to have the Drink very fine, to rack it off before the Iſing-glaſs is put in; but I can't be a Votary for this Practice, as believing the Drink muſt loſe a great deal of its Spirits by ſuch ſhifting; yet I muſt chime in with his Notion of putting the Wort ſo often over the Malt till it comes off fine as I have already taught, which is a Method that has been uſed many Years in the North of *England*, where they are ſo curious as to let the Wort lie ſome time in the Underback to draw it off from the Feces there; nor are they leſs careful to run it fine out of the Cooler into the Tun, and from that into the Cask; in all which three ſeveral Places the Wort and Drink may be had clear and fine, and then there will be no more Sediment than is juſt neceſſary to aſſiſt and feed the Beer, and preſerve its Spirits in a due Temper. But if Perſons have Time and Conveniency, and their Inclination leads them to obtain their Drink in the utmoſt Fineneſs, it is an extraordinary good way to uſe *Hippocrates* Sleeve or Flannel Bag, which I did in my great Brewhouſe at *London* for ſtraining of the Feces that were left in the Backs. As to the Quantity of Malt for brewing a Hogſhead of *October* Beer, I am of Opinion thirteen Buſhels are right, and ſo are ten, fifteen and twenty, according as People ap-

appove of; for near *Litchfield*, I know ſome have brewed a Hogſhead of *October* Beer from ſixteen Buſhels of Barley Malt, one of Wheat, one of Beans, one of Peaſe and one of Oat Malt, beſides hanging a Bag of Flour taken out of the laſt four Malts in the Hogſhead for the Drink to feed on; nor can a certain Time be limited and adjuſted for the Tapping of any Drink (notwithſtanding what has been affirmed to the contrary) becauſe ſome Hops will not be rotted ſo ſoon as others, and ſome Drinks will not fine ſo ſoon as others; as is evident in the Pale Malt Drinks, that will ſeldom or never break ſo ſoon in the Copper as the Brown ſort, nor will they be ſo ſoon ripe and fit to Tap as the high dried Malt Drink will. Therefore what this Gentleman ſays of trying Drink by firſt Pegging it before it is Tapp'd, in my Opinion is more juſt and right than relying on a limited Time for broaching ſuch Beer.

POSTSCRIPT.

We ſhall here ſubjoin a Receipt for Brewing, which has been practic'd with great Succeſs by a Gentleman in this Kingdom.

TAKE three Quarters, which is ſix Barrels or twenty-four Buſhels of Malt, boil as much Water as will work that quantity of Malt, and put it into your Keeve or Tun, and when the hot Steam is gone off ſo as you may ſee your Face or Hand

Hand in the Water, then put in your Malt and let it ſtand two Hours, and then let it run off; when the Wort is run off, put it into your Boiler, and put to it fifteen Pound of Hops, and let it ſeeth or ſimper, but not boil, over a ſlow Fire, for an Hour, then take out thoſe Hops, and put in the like quantity of freſh Hops, and let them in like manner ſeeth another Hour.

Let your Liquor be cold before you put Barm to it, and then put about a Quart or three Pints of Barm to the Wort, and when it comes to a curdly head of Barm (as it will in twenty-four Hours or thereabouts) put it into your Casks, (not ſtirring it before) fill up your Casks with ſome of the ſame Liquor two or three times a day as there ſhall be occaſion; and when it has done working, ſtop the Veſſel up.

It is beſt to put your ſecond Ale into the Barrels with which you fill'd up your firſt Drink. You have bnt one Hogſhead of the ſtrong Ale out of your Malt, which muſt be two Years old before it be bottled; the ſecond Hogſhead muſt be bottled in ſix or eight Months; and the third Hogſhead ſooner.

Note, It muſt be brewed in *October*.

F I N I S.

19/4/75